

RUTGERS UNIVERSITY STUDIES IN CLASSICAL HUMANITIES

Volume II

**THEOPHRASTUS OF ERESUS
ON HIS LIFE AND WORK**

Edited by

William W. Fortenbaugh

together with

Pamela M. Huby and Anthony A. Long



Transaction Books

New Brunswick (U.S.A.) and Oxford (U.K.)

Copyright © 1985 by Transaction, Inc.
New Brunswick, New Jersey 08903

All rights reserved under International and Pan-American Copyright Conventions. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without prior permission in writing from the publisher. All inquiries should be addressed to Transaction Books, Rutgers—The State University, New Brunswick, New Jersey 08903.

ISSN: 0732-9814

ISBN: 0-88738-009-3 (cloth)

Printed in the United States of America

This volume was made possible in part by two grants: one by the Program for Translations of the National Endowment for the Humanities and the other by the University of Liverpool.

Contents

Preface	vii
Contributors	ix
1. Diogenes Laertius 5.36-57: The <i>Vita Theophrasti</i> <i>Michael G. Sollenberger</i>	1
2. The Life, Works, and Sayings of Theophrastus in the Arabic Tradition <i>Dimitri Gutas</i>	63
3. A Survey of Theophrastean Texts and Ideas in Arabic: Some New Material <i>Hans Daiber</i>	103
4. The Starting Point of Philosophical Studies in Alexandrian and Arabic Aristotelianism <i>Dimitri Gutas</i>	115
5. Theophrastus and Hypothetical Syllogistic <i>Jonathan Barnes</i>	125
6. Theophrastus on the Limits of Teleology <i>James G. Lennox</i>	143
7. Medieval Evidence for Theophrastus' Discussion of the Intellect <i>Pamela M. Huby</i>	165
8. Theophrastus on Tastes and Smells <i>Robert W. Sharples</i>	183
9. Three Notes on Theophrastus' Treatment of Tastes and Smells <i>David N. Sedley</i>	205
10. Theophrastus on Emotion <i>William W. Fortenbaugh</i>	209
11. Theophrastus on History and Politics <i>Anthony J. Podlecki</i>	231
12. Theophrastus and the Theory of Style <i>Doreen C. Innes</i>	251
13. Theophrastus on Delivery <i>William W. Fortenbaugh</i>	269
14. Theophrastus on Pitch and Melody <i>Andrew Barker</i>	289
Index of Ancient Sources	325

Preface

This is the second volume of *Rutgers University Studies in Classical Humanities*, a biennial series under the general direction of Professor William Fortenbaugh. Volume I appeared in 1983 and its subject is the ethical epitome of Arius Didymus, court philosopher to the Emperor Augustus. Volume II focuses on Theophrastus of Eresus, as will volume III. This reflects the fact that *Rutgers Studies* was founded in close conjunction with Project Theophrastus, an international undertaking, whose goal is to collect, edit, and translate the fragments of Theophrastus, Aristotle's successor and second head of the Peripatetic school. Work on the project was begun in 1979, and since 1980 it has been most generously supported by the National Endowment for the Humanities. *Rutgers Studies II* has benefited from this support and indeed would not have been possible without it.

The majority of papers contained in volume II were originally presented at a meeting of Project Theophrastus held at the University of Liverpool on 28-31 March 1983. This meeting was organized by Mrs. Pamela Huby, Reader in Philosophy at Liverpool and by Professor Anthony Long, who was at that time Gladstone Professor of Greek at Liverpool. In attendance were some forty scholars representing seven different countries. All participants, both the local organizers and the visiting scholars, wish to express their thanks to the University of Liverpool for making its facilities available, and for helping to subvent the costs of travel and accommodation with a generous grant from the Visiting Scholars Fund. They are equally grateful to Mrs. Sandra Bargh, secretary of the Department of Greek at Liverpool, for all that she did in helping to prepare for the conference and to ensure its happy progress.

One paper in this volume is significantly different from the rest. It is "Diogenes Laertius 5.36-57: the *Vita Theophrasti*," by Dr. Michael Sollenberger. This paper contains a new edition of Diogenes' *Life of Theophrastus* and is the central portion of a Rutgers Ph.D. dissertation. It is expected that this edition of the *Vita* together with a full collection of other texts dealing with the life of Theophrastus will in time form part of the complete edition of Theophrastean fragments planned by Project Theophrastus. Publication of the larger work is still some years away, but the task of collecting fragments is nearly complete. Interested scholars are invited to make inquiries, directing them to Professor William Fortenbaugh, Project Theophrastus, Alexander Library, Rutgers University.

W.W.F. P.M.H. A.A.L.

Preface

This is the second volume of the series of papers presented at the
International Conference on the History of Science, held in London
in 1962. The first volume, published in 1963, was devoted to the
history of astronomy. This volume is devoted to the history of
biology. The papers in this volume are arranged in three parts.
The first part contains papers on the history of the theory of
evolution. The second part contains papers on the history of the
theory of inheritance. The third part contains papers on the
history of the theory of the origin of life.

The history of biology is a very broad field, and it is not
possible to cover it all in a single volume. The papers in this
volume are arranged in three parts. The first part contains
papers on the history of the theory of evolution. The second
part contains papers on the history of the theory of inheritance.
The third part contains papers on the history of the theory of
the origin of life. The papers in this volume are arranged in
three parts. The first part contains papers on the history of
the theory of evolution. The second part contains papers on
the history of the theory of inheritance. The third part
contains papers on the history of the theory of the origin of
life.

The papers in this volume are arranged in three parts. The
first part contains papers on the history of the theory of
evolution. The second part contains papers on the history of
the theory of inheritance. The third part contains papers on
the history of the theory of the origin of life. The papers
in this volume are arranged in three parts. The first part
contains papers on the history of the theory of evolution.
The second part contains papers on the history of the theory
of inheritance. The third part contains papers on the history
of the theory of the origin of life.

Contributors

- Andrew BARKER, Department of Philosophy, University of Warwick, Coventry, Warwickshire CV4 7AL, England.
- Jonathan BARNES, Balliol College, Oxford OX1 3BJ, England.
- Hans DAIBER, Faculteit der Letteren, Vrije Universiteit, 1007 MC Amsterdam, Netherlands.
- William W. FORTENBAUGH, Project Theophrastus, Alexander Library, Rutgers University, New Brunswick, New Jersey 08903, U.S.A.
- Dimitri GUTAS, Department of Near Eastern Languages and Literatures, Yale University, New Haven, Connecticut 06520, U.S.A.
- Pamela M. HUBY, Department of Philosophy, The University of Liverpool, P.O. Box 147, Liverpool L69 3BX, England.
- Doreen C. INNES, St. Hilda's College, Oxford OX4 1DY, England.
- James G. LENNOX, Department of History and Philosophy of Science, University of Pittsburgh, Pittsburgh, Pennsylvania 15260, U.S.A.
- Anthony J. PODLECKI, Department of Classics, University of British Columbia, Vancouver, British Columbia V6T 1WS, Canada.
- David N. SEDLEY, Christ's College, Cambridge CB2 3BU, England.
- Robert W. SHARPLES, Department of Greek, University College, Gower Street, London WC1E 6BT, England.
- Michael G. SOLLENBERGER, Project Theophrastus, Alexander Library, Rutgers University, New Brunswick, New Jersey 08903, U.S.A.

Contents

Author INDEX, Department of Education, University of Wisconsin, Co.	1
State Universities, Co. 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000	

1

Diogenes Laertius 5.36–57: *The Vita Theophrasti*

Michael G. Sollenberger

Diogenes' *Lives and Opinions of the Outstanding Philosophers* contains ten books, of which the fifth is devoted to Peripatetic philosophers. The *Vita Aristotelis* naturally comes first (5.1–35) and is followed by the *Vita Theophrasti* (5.36–57). While the former has recently been given special attention by Ingemar Düring, whose 1957 edition is readily available in his *Aristotle in the Ancient Biographical Tradition*, the latter has not received the attention it deserves. Indeed, it has not received special treatment since 1497, when it appeared, together with the *Vita Aristotelis*, in the second volume of the Aldine Aristotle. The text of Aldus' edition is quite unsatisfactory, for it is based on a reading of an inferior manuscript¹ and embodies many conjectural emendations. Hermann Usener did publish an edition of Diogenes' catalogue of Theophrastean writings (5.42–50) in his *Analecta Theophrastea* (Diss. Bonn 1858), but he, too, neglected much of the manuscript evidence, only consulting Cober's collation of a few manuscripts and some early editions and translations.² The complete life of Theophrastus has, of course, been included in all editions of the whole of Diogenes' work, but the text has never been adequately supplied with textual apparatus. My aim, then, is to provide scholars with an edition of the *Vita Theophrasti* which is complete with upper and lower apparatus and generally meets the standards of modern philology.

I. THE MANUSCRIPTS AND THEIR GROUPING

There are at least thirty-eight known manuscripts containing all or large portions of Diogenes' work.³ Each is written in minuscule lettering and none dates before the twelfth century. In preparing for this edition of the *Vita Theophrasti* I have examined and collated nineteen manuscripts, and in each case I have worked from microfilms most graciously loaned by Professor

Herbert Long, editor of the Oxford Classical edition of Diogenes' work (Oxford 1964). For one manuscript, N = cod. Monacensis Gr. 159, I have relied on the variant readings selectively recorded by Spengel in the second volume of Hübner's edition of Diogenes (Leipzig 1828–31) 613–745, and also those readings provided by Usener in his *Analecta Theophrastea* 3–12. Of the manuscripts not used, two (O = cod. Vaticanus Ottobonianus Gr. 355 and R = cod. Parisinus Gr. 1405) contain only Book One and part of Book Two of the *Lives*, three (b = cod. Caesenensis Malatestianus 28.2, c = cod. Laurentianus 85.9 and z = cod. Laurentianus 59.1) comprise only Book Three on Plato, six are epitomized excerpta (Delta = cod. Athous Monasterii S. Dionysii 163 or 166, Lambda = cod. Leidensis Bibl. publ. Gr. 75, Pi = cod. Parisinus suppl. Gr. 134, Phi = cod. Vaticanus Gr. 96, Psi = cod. Vaticanus Palatinus Gr. 93, and cod. Vaticanus Gr. 1144) judged worthless for the reconstruction of Diogenes' text⁴ and seven were not available to me (J = cod. Marcianus Gr. 394, K = cod. Vindobonensis hist. Gr. 59, M = cod. Marcianus Gr. 393, Leid. = cod. Leidensis Bibl. publ. Gr. 41a, Matr. = cod. Matritensis Gr. 4676, Mosq. = cod. Mosquensis [Musei historici] Gr. 463, and Z = cod. Raudnitzianus Lobkowicensis VI F. c. 38). The omission of these last seven is of no great importance, for all of them are late and offer a text which is decidedly inferior.⁵

All manuscripts derive from a single archetype. This is especially clear from the large lacuna at the end of Book Seven which is shared by all manuscripts.⁶ My own study of errors found in the *Vita Theophrasti* and common to all manuscripts investigated offers further confirmation. The following is a list of these errors:

- 5.41 line 64 *ērchometha*
- 5.42 line 84 omit *ē*
- 5.44 line 134 *Peri kataphaseōs a' kai apophaseōs*
- 5.46 line 184 *phusikōn*
- 5.46 line 185 *Phusikōn*
- 5.53 line 338 *Meidiou* (*Mēdiou* B)
- 5.54 line 345 omit *ta*
- 5.57 line 385 *Pellaneus* (*Pelaneus* F)

The manuscripts used may be divided into two groups. Group 1 contains five older manuscripts: B, F, P, Q, and Co. Due to their age, the superior quality of the text which they consistently present and their relationships to one another, to Group 2 manuscripts, and to the *archetypus unicus*, these five are considered authoritative and are always cited in the critical apparatus. Their consensus is designated by the lower case *siglum* a.

Of these five manuscripts, three—B, F and P—are regarded by scholars as most authoritative.⁷ B is the oldest, being dated to the twelfth century, and embodies remarkably few emendations or corruptions. While itacism and other sound-blurs due to changes in the pronunciation of Greek occur somewhat frequently, B appears to have been quite carefully copied from its exemplar. F, which Cobet used as the basis for his edition of Diogenes' work, belongs to the thirteenth century and abounds with variant readings, omissions, and other corruptions. P, which may be assigned to the late thirteenth or early fourteenth century, has been corrected several times,⁸ and in many cases new readings have obliterated original ones.

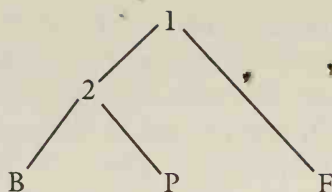
The relationship of B, F, and P is indicated by a comparison of the common errors which any pair offers against a third:

	B P	F
5.36 line 3	<i>proteron</i>	<i>prōton</i>
5.41 line 66	<i>autōi</i>	<i>autou</i>
5.41 line 70	omit <i>ho</i>	<i>ho</i>
5.44 line 133	<i>hidrōtos</i>	<i>hidrōtōn</i>
5.46 line 184	<i>historikōn</i>	<i>historiōn</i>
5.47 line 214	omit <i>α'</i>	<i>α'</i>
5.47 line 230	<i>xunagōgēs</i>	<i>sunagōgēs</i>

	P F	B
5.37 line 19	<i>diktēriou</i> ^{ac}	<i>deiktēriou</i>
	<i>dikastēriou</i> ^{pc}	
5.42 line 92	<i>lithoumenōn</i>	<i>aithoumenōn</i>
5.46 line 197	<i>Deilēnōn</i>	<i>Deilinōn</i>
5.49 line 274	<i>Akadēmias</i>	<i>Akadēmeias</i>
5.54 line 347	<i>touton</i>	<i>toutōn</i>

	B F	P
5.37 line 19	<i>prosdischilioi</i>	<i>pros dischilious</i>
5.51 line 313	<i>epikomisthēnai</i>	<i>epikosmēthēnai</i>

From these comparisons it is clear that B and P exhibit more common errors than either F and P or B and F. This suggests a relationship that may be represented by the following stemma:



In this diagram 1 represents the archetype from which all manuscripts of Diogenes' work derive. 2 is a hypothetical manuscript (hyparchetype), the exemplar of B and P. None of the three, B, F, and P, is an exemplar of the other two. The errors common to B and P against true readings in F dictate the placement of B and P as descending from hyparchetype 2, which is the source of their common errors. The alternative is to suppose that these errors were already in the archetype, 1: all three manuscripts were copied from 1, but in F the errors were removed through emendation. This is possible but less likely.⁹

P involves special difficulties, for it has undergone extensive corrections. In many cases the original reading has been obliterated, and it is only by utilizing Q and Co—early copies of P made before P was radically transformed by corrections—that we can discover what the original reading of P may have been.¹⁰ Düring's statement, "It would . . . be sufficient to record only the readings of BPF and discard all other readings completely,"¹¹ is therefore misleading. For P must be read in conjunction with Q and Co.

Group 2 consists of the other fifteen manuscripts: A, C, D, E, G, H, I, N, S, T, U, V, W, X, and Y. These fifteen constitute the greater part of the so-called *editio vulgata*. They are marked by a generally uniform character and offer a decidedly inferior text. There is no evidence that any of these fifteen represents a tradition independent of those established by Group 1 manuscripts. In fact, all derive in one way or another from the members of Group 1.¹² Their value lies primarily in the fact that they sometimes offer good alternate readings, which nonetheless appear in every case to be no more authoritative than conjectural emendations.

Group 2 manuscripts may be subdivided into two families, of which W is one parent and V the other.¹³ These two manuscripts are the earliest and best representatives of Group 2, and for this reason their readings are regularly recorded in the *apparatus criticus*; only occasionally are the other members of Group 2 cited, and then only when they offer possible or interesting variants.¹⁴

W appears to have been copied from P after Q and Co but before many readings in P were wholly effaced by corrections. It has, however, received interpolations from some other source or sources.¹⁵ Its family consists of four manuscripts: E, H, I, and Y. These four are all late manuscripts. They

exhibit such a consistently uniform text that their relations and interdependence seem undeniable. All four share many readings with W and, in turn, with P in its corrected form. Not only has W been copied from P, but H, too, shows indications that P, after undergoing many corrections, was its source. The other three seem to have been copied from H.¹⁶ Therefore all are judged to derive from the same source or sources. However, each is severely contaminated by conjectures and readings taken from some other source or sources, although no one of them exhibits clear signs of having been extensively corrected. Whenever this subgroup differs from W, the consensus is designated in the *apparatus criticus* by the lower case *siglum* h.

V is close to P in its corrected form and also to W, but nevertheless offers significant variant readings that do not permit us to conclude that it was copied directly from either of them. It may be that V was copied from a now-lost manuscript akin to P or from which P received some corrections. The family of V is constituted by the eight remaining manuscripts of Group 2: C, D, G, N, S, T, U, and X. All eight are late; none is dated prior to the fifteenth century. One of these, U, is a simple apograph of V and for this reason can be eliminated from consideration. The others fall into three subgroups: (1) D, G, S, and T form the first subgroup. These four offer a better text than any of the other subgroups. Their general agreement with V is apparent, yet each offers variants of its own. Their agreement is designated in the critical apparatus by the *siglum* d. (2) A and N form the second subgroup.¹⁷ The relation of this subgroup to V is uncertain, but I have placed it within the family of V due to its general agreement with d. Its *siglum* is n. (3) C and X comprise the third subgroup. Like n, this subgroup, labeled c, exhibits no direct affinity to V but is classed within V's family due to its closeness to d and n. While each subgroup has its own peculiar and distinctive characteristics, each manuscript does share many errors with V, with the other members of the family of V and with the other members of Group 2. These relationships, however, allow for no clear-cut lines of descent within the family of V.

Some mention should be made of the *editio princeps* of Diogenes' *Lives* published by Frobenius and Episcopius in Basel in 1533. It is designated in the critical apparatus as Frob. In the preface to this edition it is remarked that the exemplar used was a manuscript owned by Matthaeus Aurigallus, a professor of Hebrew and Greek at Wittenberg (1480–1553). A number of scholars claim that Aurigallus's codex was a copy of Z, cod. Raudnitzianus Lobkowicensis VI F. c. 38.¹⁸ Bohuslav von Hassenstein (1460/1–1510) had Z in his library at Kommotavium in Bohemia, where it was copied either by Aurigallus himself or by his friend Sigismund Gelenius, once a corrector for Frobenius's publishing house.¹⁹ Whatever the truth concerning the

manuscript used by Frobenius, it is now lost. The *editio princeps* is our only witness of its readings and for this reason is occasionally cited in the critical apparatus.²⁰

II. TEXT AND APPARATUS

Little need be said about the text proper. The traditional section numbers have been preserved and recorded in the left-hand margin. Lines are numbered continuously by fives in the right-hand margin rather than beginning anew on each page. Paragraphing does not necessarily coincide with section divisions and has no basis in the manuscript tradition. Sometimes I follow earlier editors, but on occasion I introduce my own divisions. Something similar can be said about punctuation. Since the manuscripts are unreliable in this matter, I have made my own decisions, sometimes in agreement with and sometimes in disagreement with other editors. The one exception is the punctuation in the list of writings. I have, however, not imitated the manuscripts, which list titles in horizontal succession, separating each title by means of a Greek semicolon. Instead I have listed them vertically, as, e.g., Long does in the Oxford Classical text.²¹ The quotation marks that appear in the text are largely mine; I have used them only when direct discourse is indicated in the text.

The upper apparatus serves as a register in which are listed three types of reference. First, direct quotations and parallel passages found elsewhere in Diogenes' work and in the works of other authors are listed. As a general rule, authors who wrote after 1500 are excluded from these references. In regard to the book list I have not only given references to passages in which the same Theophrastean title is cited but have also recorded variations. To avoid needless clutter, minor variations in declension and word order have been disregarded: e.g., 5.46 line 184 the citations *en tois Phutikois*, *en g' tôn Phutikôn*, and *ta epigraphomena Phutika* are all cited as *Phutika*. Furthermore, references to book numbers in other authors are with rare exception ignored. Only where the book number cited is incompatible with Diogenes' number has the variant been recorded.

Second, there occur references to passages elsewhere in Diogenes' work and in the works of other authors which are not precisely parallel to the particular passage in Diogenes, but which are somehow related or suggestive. Such allusions, imitations, paraphrases, *loci similes* are distinguished by *cf.*, *vid.*, *respicit*, or some other word or phrase. In addition, if one or more of the writers mentioned is dependent upon another, this has been noted.

Third, references to standard collections are made and conventional abbreviations are used, e.g., *FGrH*, *SVF*, and the like.

The lower apparatus is reserved for textual matters, i.e., variant manuscript readings and conjectures. Since there are recognized differences in the value of the manuscripts and a complete listing of all variant readings found in all manuscripts would serve no useful purpose, I have adopted the following principles: Whenever manuscript readings are recorded, the readings of B, F, P, Q, and Co (the five major manuscripts) and also of W and V (the principal representatives of the *vulgata*) will be cited (see above, section I). The readings of other manuscripts will be cited only if they are of interest for establishing the text of Diogenes. Readings will be reported only when there is significant or interesting variation between manuscripts. This means that many insignificant variants, even in the case of the five major manuscripts, will be ignored: e.g., simple errors in orthography, errors caused by ditto-graphy and haplography, variations due to itacism, and other sound blurs. Proper names are a special problem, for it is not always clear that a particular form is quite wrong or impossible. For this reason I have used my own judgment, sometimes omitting and sometimes recording variations. Further differences in word division, aspiration, accent, moveable-nu, iota subscript, elision, contraction, and abbreviation are with rare exception ignored.

III. VITA THEOPHRASTI

Sigla manuscriptorum et editionum

Codices semper citati:

- B = Codex Neapolitanus Burbonicus III B 29, saec. xii
- F = Codex Laurentianus 69.13, saec. xiii
- P = Codex Parisinus Gr. 1759, saec. xiii ex. aut xiv in.
- Q = Codex Parisinus Gr. 1758, saec. xiv
- Co = Codex Constantinopolitanus Veteris Serail 48, saec. xiv ex. aut xv in.
- a = consensus B F P Q Co
- W = Codex Vaticanus Gr. 140, saec. xiv ex. aut xv in.
- V = Codex Vaticanus Gr. 1302, saec. xiv ex. aut xv in.

Codices rarius citati:

Familia codicis W

- E = Codex Vaticanus Palatinus Gr. 182, saec. xv ex. aut xvi in.
- H = Codex Laurentianus 69.35, saec. xv ex. aut xvi in.
- I = Codex Vaticanus Barberinus 21, saec. xvi
- Y = Codex Angelicanus (Romae) Gr. 97, saec. xvi in.
- h = consensus E H I Y

Familia codicis V

- U = Codex Vaticanus Urbinas Gr. 108, saec. xv in.
- D = Codex Neapolitanus Burbonicus III B 28, saec. xv in.
- G = Codex Laurentianus 69.28, saec. xv

8 Theophrastus of Eresus

S = Codex Vaticanus Palatinus Gr. 261, saec. xv

T = Codex Vaticanus Urbinas Gr. 109, saec. xv

d = consensus D G S T

A = Codex Arundelianus (Brit. Mus.) Gr. 531, saec. xv

N = Codex Monacensis Gr. 159, saec. xvi in.

n = consensus A N

C = Codex Cantabrigiensis collegii S. Trinitatis R 9.18/19, saec. xv

X = Codex Vaticanus Reginae Gr. 103, saec. xv

c = consensus C X

Editiones citatae:

Ald. = Vita Theophrasti praeposita tomo secundo operum Aristotelis ed. Aldina, Venetiae a. 1497

Frob. = editio princeps ap. Frobenium, Basileae a. 1533

Conspectus nominum quae in apparatibus criticis inveniuntur

Apelt, Otto. *Diogenes Laertius: Leben und Meinungen berühmter Philosophen*. Philosophische Bibliothek 53/4 (Leipzig 1921, ed. secunda a K. Reich. Hamburg 1967).

Bocheński, I.M. *La logique de Théophraste*. Collectanea Friburgensia, nouv. sér. 32 (Fribourg en Suisse 1947).

Boyanécé, Pierre. *Le culte des muses chez les philosophes grecs*. Études d'histoire et de psychologie religieuses. Bibliothèque des écoles françaises d'Athènes et de Rome 141 (Paris 1936).

Burn, R. ap. H.S. Long, *Diogenis Laertii Vitae Philosophorum* (Oxford 1964).

Casaubon, Isaac. *Notae ad Diogenis Laertii libros de vitis, dictis et decretis principum philosophorum* (Coloniae Allobrogum sive Genavae 1616) denuo expressae ab H.G. Hübner, *Commentarii in Diogenem Laertium*, vol. I (Lipsiae et Londini 1830).

Cobet, C.G. *Diogenis Laertii De clarorum philosophorum vitis, dogmatibus et apophthegmatibus libri decem* (Parisiis 1850 et 1862).

———. *Novae lectiones quibus continentur observationes criticae in scriptores Graecos* (Lugduni Batavorum 1858).

Düring, Ingemar. *Aristotle in the Ancient Biographical Tradition*. Studia Graeca et Latina Gothoburgensia V (Göteborg 1957).

Fortenbaugh, William W. *Quellen zur Ethik Theophrasts*. Studien zur antiken Philosophie 12 (Amsterdam 1984), sed ad vv. 134 et 247 vid. partem IV, "Textual Problems."

Gigante, Marcello. *Diogene Laerzio, Vite dei Filosofi* (Bari 1962).

Gutas, Dimitri. "The Life, Works and Sayings of Theophrastus in the Arabic Tradition." *Rutgers University Studies in Classical Humanities* 2 (1985) 63–102.

Hecker, Alfonse, "Epistolae criticae ad F.G. Schneidewinum V. Cl. pars secunda." *Philologus* 5 (1850) 414–512.

- Hermann, C.F. ap. H.G. Hübner, *Diogenis Laertii De vitis, dogmatis et apophthegmatis clarorum philosophorum libri decem*, vol. II (Lipsiae et Londini 1831).
- Meibom, Marcus. *Diogenis Laertii De vitis, dogmatibus et apophthegmatibus clarorum philosophorum libri X* (Amstedodami 1692).
- Meineke, August. ap. H.G. Hübner, *Diogenis Laertii De vitis, dogmatis et apophthegmatis clarorum philosophorum libri decem*, vol. II (Lipsiae et Londini 1831).
- Ménage, Gilles (Menagius, Aegidius). *Observationes et Emendationes in Diogenem Laertium* (Amstelodami 1692) denuo expressae ab H.G. Hübner, *Commentarii in Diogenem Laertium*, vol. I (Lipsiae et Londini 1830).
- Meurs, Jan van (Meursius, Johannes). *Theophrastus. Sive, de illius libris, qui iniuria temporis interciderint, liber singularis* (Lugduni Batavorum 1640).
- Nunnesius, Petrus Iohannes. ap. Ménage, *Observationes et Emendationes in Diogenem Laertium*, supra.
- Regenbogen, Otto. "Theophrastos," no. 3. *RE Suppl.* VII (Stuttgart 1940) 1354–1462.
- Reiske, J.J. "Reiskii Animadversiones in Laertium Diogenem." ed. ab H. Diels. *Hermes* 24 (1889) 302–24.
- Richards, Herbert. "Laertiana." *The Classical Review* 18 (1904) 340–6.
- Roeper, Gottlieb. "Emendationen zu Diogenes Laertius." *Philologus* 1 (1846) 652–63.
- Rose, Valentine. *Aristoteles Pseudepigraphus* (Lipsiae 1863).
- Salmasius, Claudius (Saumaise, Claude de). *Miscellae defensiones pro Cl. Salmasio De variis observationibus & emendationibus ad ius Atticum et Romanum pertinentibus* (Lugduni Batavorum 1645).
- Schmidt, Maximilian. *De Theophrasto Rhetore Commentarius* (Diss. Hallensis 1839).
- Schottus, Andreas. ap. Ménage, *Observationes et Emendationes in Diogenem Laertium*, supra.
- Steinmetz, Peter. *Die Physik des Theophrastos von Eresos*. Palingenesia: Monographien und Texte zur klassischen Altertumswissenschaft I (Bad Homburg 1964).
- Stephanus, Henricus. *Diogenis Laertii De vitis, dogmatis et apophthegmatis eorum qui in philosophia claruerunt libri X* (Parisiis 1570, iterum Parisiis et Genavae 1594, et denuo Genavae et Coloniae Allobrogum 1615).
- Usener, Hermann K. *Analecta Theophrastea*. Diss. Bonn 1858. denuo in *Kleine Schriften* expressa a L. Radermacher, vol. I (Leipzig 1912) 50–90.
- Wyse, W. ap. F. Wehrli, *Die Schule des Aristoteles*. Vol. IX: *Eudemos von Rhodos*, ed. secunda. (Basel 1967).

ΘΕΟΦΡΑΣΤΟΣ

1

- 36 Θεόφραστος Μελάντα Ἐρέσιος κναφέως υἱός, ὥς φησιν Ἀθηνόδωρος ἐν ἡ' Περιπάτων. οὗτος πρῶτον μὲν ἤκουσεν Ἀλκίππου τοῦ πολίτου ἐν τῇ πατρίδι, εἴτ' ἀκούσας Πλάτωνος μετέστη πρὸς Ἀριστοτέλην· κακείνου εἰς Χαλκίδα

5

2 Μελάντα] *Suda*, s.v. Θεόφραστος (no. 199 pars 2 p. 701.21–2 Adler) et *Arsenius*, *Violetum* p.295.19 Walz

Ἐρέσιος] *Suda*, s.v. Θ. (no.199 pars 2 p.701.21–2 Adler), *Arsenius*, *Viol.* p.295.16 Walz, *Strabo* 13.2.4 618, *Gellius*, *NA* 13.5, *Plutarchus*, *De exilio* 14 605A–B, *Aelianus*, *VH* 8.12, *Athenaeus*, *Deipnosoph.* 9.387B, *Clemens Alexandrinus*, *Protrept.* 5.66.5 (GCS t.12 p.51.4–5), *idem ap. Euseb.*, *Praep. evangel.*, 10.6.14 (GCS t.43.1 p.577.15), *Epiphanius*, *Adv. Haer. Panarion* 3.36 (DG p.592.15), *Stephanus Byzantinus*, *Ethnica*, s.v. Ἐρεσος (p.275.17–18 Meineke), *Vita Arist. Marciana* 17 (Düring, p.100), *Vita Arist. Latina* 18 (Düring, p.153) et *Vita Arist. vulgata* 17 (Düring, p.134)

4–5 D.L. 3.46

5–6 κακείνου–σχολήν] *Suda*, s.v. Θ. (no.199 pars 2 p.701.22–3 Adler)

5–7 κακείνου–ἐκατοστῇ] *Apollodorus* fr. 72a Jacoby; *similia*, *sed sine verbis αὐτὸς–σχολήν*, *habent Apollod. ap. D.L.* 5.10 (fr.56. VII Jacoby) et *Dionysius Halicarnassensis*, *Ep. ad Amm.* 5 (t.1 p.263.8–9 Usener et Radermacher)

1 ΘΕΟΦΡΑΣΤΟΣ PQC_o: om. BFWV (*sed spatium relic-tum BFW*)

3 πρῶτον F: πρότερον BPQC_oWV

ἤκουσεν BFP^{sl}QC_o^{sl}WmgV: om. PacCo^{ac}Wac

4 Ἀλκίππου BP^{mg}CoW: Λακίππου PacV: Λευκίππου Q: Ἀκίππου F

τῇ BPQC_oWV: om.F

εἴτ' FPQC_oWV: τ' B

5 εἰς BPQC_oWV: πρὸς F

ὑποχωρήσαντος, αὐτὸς διεδέξατο τὴν σχολὴν Ὀλυμπιάδι τετάρτῃ καὶ δεκάτῃ καὶ ἑκατοστῇ. φέρεται δ' αὐτοῦ καὶ δοῦλος φιλόσοφος ὄνομα Πομπύλος, καθά φησι Μυρωνιανὸς Ἀμαστριανὸς ἐν τῷ πρώτῳ τῶν Ὀμοίων ἱστορικῶν κεφαλαίων.

10

ὁ δὲ Θεόφραστος γέγονεν ἀνὴρ συνετώτατος καὶ φιλοπονώτατος καί, καθά φησι Παμφίλῃ ἐν τῷ τριακοστῷ δευτέρῳ τῶν Ὑπομνημάτων, διδάσκαλος Μενάνδρου τοῦ κωμικοῦ· ἄλλως τε καὶ εὐεργετικὸς καὶ φιλόλογος. Κάσανδρος γοῦν αὐτὸν ἀπεδέχετο καὶ Πτολεμαῖος ἔπεμψεν ἐπ' αὐτόν. τοσοῦτον δ' ἀποδοχῆς ἡξιοῦτο παρ' Ἀθηναίοις ὥστ' Ἀγνωνίδης τολμήσας ἀσεβείας αὐτὸν γράψασθαι μικροῦ καὶ προσῶφλεν. ἀπήντων τ' εἰς τὴν διατριβὴν αὐτοῦ μαθηταὶ

15

6 αὐτὸς–σχολὴν] [*Plut.*], *Vitae X. orat.* 850C et *Suda*, s.v. Θ. (no. 199 pars 2 p.701.22–3 Adler) et Ἀριστόξενος no. 1927 (pars 1 p.357.10–11) et *Strabo* 13.1.54 608; *Galen*, *De hist. phil.* 2 (t.19 p.228.8–9 Kühn) ὅσπερ (sc. Ἀριστοτέλης) Θεόφραστον προεστήσατο τῆς κατ' αὐτὸν αἱρέσεως; de locis Arabicis vid. *Gutas* I.1, II.1 et IV. 2; cf. etiam *Gell.*, NA 13.5 et *Hesych.*, *Vita Aristotelis* 9 (*Düring*, p.82)

7–8 *Gellius*, NA 2.18, ex quo pendet *Macrobius*, *Saturnalia* 1.11.42, quo loco codd. *Philostrati servus habent quod Meurs Theophrasti emend.*

7–10 *Myronianus* fr.5 *FHG* t.4 p.455

12–14 *Pamphila* fr.10 *FHG* t.3 p.522

13–14 *Menandri test.* 7.1 *Körte et Thierfelder*; cf. *Alciph.*, *Epist.* 4.19.13–14 = *Menandri test.* 7.2 K.–T.

14–15 Κάσανδρος–ἀπεδέχετο] *Suda*, s.v. Θ. (no. 199 pars 2 p.701.28–9 Adler)

18–19 *Hesychius Milesius*, *FHG* t.4 p.167 fr.7.35 et *Suda*, s.v. Θ. (no. 199 pars 2 p.701.27 Adler); cf. *Plut.*, *Quomodo*

13 Ὑπομνημάτων BPQCoWV: Ὑπομνημονευμάτων F

13–14 κωμικοῦ aWV: ποιητοῦ c

14 εὐεργετικὸς aWV: ἐνεργητικὸς Richards: εὐρετικὸς Hecker

15 ἐπ' aW: πρὸς V

16–17 Ἀγνωνίδης BFPQWV: Ἀγωνίδης Co

- πρὸς δισχιλίους. οὗτος τὰ τ' ἄλλα καὶ περὶ δεικτηρίου τοιαῦτα διείλεκται ἐν τῇ πρὸς Φανίαν τὸν περιπατητικὸν ἐπιστολῇ. “Οὐ γὰρ ὅτι πανήγυριν, ἀλλ' οὐδὲ συνέδριον ῥάδιον, οἷόν τις βούλεται, λαβεῖν. αἱ δ' ἀναγνώσεις ποιοῦσιν ἐπανορθώσεις. τὸ δ' ἀναβάλλεσθαι πάντα καὶ ἀμελεῖν οὐκέτι φέρουσιν αἱ ἡλικίαι.” ἐν ταύτῃ τῇ ἐπιστολῇ ‘σχολαστικὸν’ ὠνόμακεν. 20
- 38 τοιοῦτος δὲ ὢν, ὅμως πρὸς ὀλίγον ἀπεδήμησε καὶ οὗτος καὶ πάντες οἱ λοιποὶ φιλόσοφοι, Σοφοκλέους τοῦ Ἀμφικλείδου νόμον εἰσενεγκόντος μηδένα τῶν φιλοσόφων σχολῆς ἀφηγεῖσθαι ἂν μὴ τῇ βουλῇ καὶ τῷ δήμῳ δόξῃ· εἰ δὲ μὴ, θάνατον εἶναι τὴν ζημίαν. ἀλλ' αὖθις ἐπανήλθον εἰς 30 νέωτα, Φίλωνος τὸν Σοφοκλέα γραψαμένου παρανόμων, ὅτε καὶ τὸν νόμον μὲν ἄκυρον ἐποίησαν Ἀθηναῖοι, τὸν δὲ Σοφοκλέα πέντε ταλάντοις ἐζημίωσαν, κάθοδόν τε τοῖς φιλοσόφοις ἐψηφίσαντο, ἵνα καὶ Θεόφραστος κατέλθῃ καὶ ἐν τοῖς ὁμοίοις ᾗ. 35

quis suos in virtute sentiat profectus 6.78E et *De se ipsum citra invidiam laudando* 17.545F

19–25 *Phanias* fr. 4 *Wehrli*

20–1 ἐν-ἐπιστολῇ] cf. *D.L.* 5.50 v.289

27–29 *Pollux*, *Onomast.* 9.42 (t.2 p.158.2–5 *Bethe*) et *Alexis Comicus* ap. *Athen.* 13.610E–F = *Alexis* fr.94 (*CAF* t.2.1 p.327)

31 *Athen.* 11.508F et 13.610F

19 δισχιλίους *P^{pc}QCoWV*: δισχίλιοι *BFP^{ac}*

δεικτηρίου *BV^{ac}*: δικτηρίου *F^{ac}P^{ac}Q*: δικαστηρίου *F^{pc}P^{sl}CoWV^{mg}*: διδασκαλίου *Wyse*: διδακτηρίου *Apelt*

19–20 τοιαῦτα *BFPCoW*: ταῦτα *QV*

24 οὐκέτι *aWV*: <δ> οὐκέτι *Boyanéc*

24–25 σχολαστικὸν *aWV*: σχολαστικὸν <αὐτὸν> *Ménage*: σχολαστικὸν <ὄνομα> *Gigante*

28 εἰσενεγκόντος *BPQCoWV*: εἰσάγοντος *F*

30 ἐπανήλθον *aWV*: ἐπανήλθεν *Frob.*

31 Φίλωνος *Ménage* sec. *Athen.* 13.610F: Φιλίωνος *FCo*:

Φιλλίωνος *PQVW*: Φαλλίωνος *B*

34–5 κατέλθῃ-ᾗ *aWV*: κατέλθοι-εἴη *Cobet*

ἐν *FPQ*

- 39 τοῦτον Τύρταμον λεγόμενον Θεόφραστον διὰ τὸ τῆς
φράσεως θεσπέσιον Ἀριστοτέλης μετωνόμασεν· οὐδὲ καὶ τοῦ
νείεος Νικομάχου φησὶν ἐρωτικῶς διατεθῆναι, καίπερ ὄντα
διδάσκαλον, Ἀρίστιππος ἐν τετάρτῳ Περὶ παλαιᾶς τρυ-
φῆς. λέγεται δ' ἐπ' αὐτοῦ τε καὶ Καλλισθένους τὸ ὅμοιον 40
εἰπεῖν Ἀριστοτέλην, ὅπερ Πλάτωνα, καθὰ προεῖρηται, φα-
σὶν εἰπεῖν ἐπὶ τε Ξενοκράτους, καὶ αὐτοῦ τούτου· φάναι

36–7 Cicero, *Orator* 19.62, Strabo 13.2.4 618, Quintilian., *Inst. orat.* 10.8.4, Seneca, *NQ* 6.13.1, Plinius, *HN* 1 praef. 29, Proclus, *In Plat. Cratylum prooem.* 16.7 (p.6.26–7 Pasquali), [Sergius], *Expl. in Donatum* 1 (GL t.4 p.530.14–15), Boethius, *In Arist. De interpr. sec. ed.* 1.2 (p.56.1–2 Meiser), Ammonius, *In Arist. De interpr.* 1 16a3–9 (CIAG t.4.5 p.20.18–19), Olympiodorus, *In Plat. prim. Alcib.* 2.35–43 (p.2–3 Westerink), Anon., *Prol. in Plat. philos.* 1.18–19 (p.3.14–21 Westerink), Steph. Byz., *Ethnica*, s.v. Ἑρεσος (p.275.19–276.1 Meineke), Suda, s.v. Θ. (no. 199 pars 2 p.701.23–7 Adler), Tzetzes, *Hist.* 6.412–7, 9.928 cum schol. et 11.850–2, Eustathius, *Epist.* 19 (p.327.63–4 Tafel); cf. Io. Scott. Eriug., *Annot. in Mart. Capellam* 490.20 (p.203.78 Lutz) et 493.2 (p.204.22–3) et Remig. Autissiod., *Comm. in Marcianum Capellam* 490.17 (t.2 p.323.22–3 Lutz)

37–9 Suda, s.v. Θ. (no. 199 pars 2 p.701.27–8 Adler) et Νικόμαχος (no. 398 pars 3 p.469.16)

40–1,45 L. Sternbach, *Gnom. Vat.* no. 52, quo loco similia verba Aristoteli attribuuntur; Cicero, *Epist. ad Att.* 6.1.12, Brutus 56.204 et *De oratore* 3.9.36, Quintil., *Inst. orat.* 2.8.11, Anon. (vel Zosimus?), *Vita Isocratis* 3 (p.257.99–102 Westermann) et Suda, s.v. Ἐφωρος (no. 3953 pars 2 p.490.6–7 Adler), quibus locis idem ab Isocrate de Ephoro et Theopompo dicitur; Quintil., *Inst. orat.* 10.1.74, de Ephoro solo; cf. Longinum, *De sublim.* 2.2

41 προεῖρηται] D.L. 4.6

CoWV: om. B

37 φράσεως aWV: φρονήσεως καὶ φράσεως c
οὐδ' aWV: ὄν d

38 διατεθῆναι BFPCoV: διασωθῆναι QW

γάρ, τοῦ μὲν Θεοφράστου καθ' ὑπερβολὴν ὀξύτητος πᾶν
τὸ νοηθὲν ἐξηρμηνεύοντος, τοῦ δὲ νωθοῦ τὴν φύσιν ὑπ-
άρχοντος, ὥς τῷ μὲν χαλινῷ δέοι, τῷ δὲ κέντρον. λέγεται 45
δ' αὐτὸν καὶ ἴδιον κῆπον σχεῖν μετὰ τὴν Ἀριστοτέλους
τελευτήν, Δημητρίου τοῦ Φαληρέως, ὃς ἦν καὶ γνῶριμος
αὐτῷ, τοῦτο συμπράξαντος.

φέρειται δ' αὐτοῦ ἀποφθέγματα ταυτὶ χρειώδη. θᾶττον
40 ἔφη πιστεῦειν δεῖν ἵππῳ ἀχαλίνῳ ἢ λόγῳ ἀσυντάκτῳ. πρὸς 50
δὲ τὸν ἐν τῷ συμποσίῳ σιωπῶντα τὸ ὅλον ἔφη, “εἰ μὲν
ἀμαθὴς εἶ, φρονίμως ποιεῖς· εἰ δὲ πεπαίδευσαι, ἀφρόνως.”
συνεχὲς τε ἔλεγε πολυτελὲς ἀνάλωμα εἶναι τὸν χρόνον.

ἐτελεύτα δὴ γηραιός, βιούς ἔτη πέντε καὶ ὀγδοήκοντα,

46–8 *Demetr. Phal. fr.5 Wehrli*

47 γνῶριμος] *Strabo 9.1.20 398 et Pap. Herc. ined. 453*
fr.IV.9 (Crönert p.67); cf. etiam Ciceronem, De fin. 5.19.50,
De off. 1.1.3 et Brut. 9.37

50–2 *Antonius Melissa, Loci communes 1.73 (PG t.136 col.*
992D), Maximus Confessor, Loci communes 20 (PG t.91
col. 848B), Arsenius, Violetum p.295.21–4 Walz, L. Stern-
bach, Gnom. Vat. no. 333 = Flor. Par. xxix.10, cod. Vat. Gr.
1144 f. 229^r = App. Vat. II. 34, cod. Ottobon. Gr. 192 f.
208^r, cod Par. suppl. Gr. 134 f. 253^{r-v} = Gnom. Par. 180,
Γνωμικά τινα (Boissonade, Anecd. Gr. t.2 p.467.9–11); de
loco Arabico vid. Gutas dictum no. 25; Plut., Quaest. conv.
3.1 644F, quo loco simile dictum Simonidi attribuitur; Max.
Conf., Loci comm. 47 (PG t.91 col. 940C–D), quo loco
dictum proxime idem Demostheni attribuitur; Sternbach,
Gnom. Vat no. 159, quo loco dictum simile, ratione mutata,
Bioni (fr.77 Kindstrand) attribuitur

54 *Apollod. fr.72b Jacoby*

44 ἐξηρμηνεύοντος *BPQCoWV*: ἐρμηνεύοντος *F*
φύσιν *BFCoWV* et fort. *P* (in compendio scriptum): φήμην
Q (in compendio scriptum)

48 τοῦτο *FPQCoWV*: τούτῳ *B*

51 ἐν τῷ συμποσίῳ *BPQWV*: ἐν συμποσίῳ *FCo*

52 εἶ *BPQCoWV*: ἦ *F*

54 ἐτελεύτα *aWV*: ἐτελεύτησε *h*

ἐπειδήπερ ὀλίγον ἀνῆκε τῶν πόνων. καὶ ἔστιν ἡμῶν εἰς 55
αὐτόν·

οὐκ ἄρα τοῦτο μάταιον ἔπος μερόπων τινὶ λέχθη,
ῥήγνυσθαι σοφίης τόξον ἀνιέμενον·
δὴ γὰρ καὶ Θεόφραστος ἕως ἐπόνει μὲν ἄπηρος
ἦν δέμας, εἴτ' ἀνεθείς κάτθανε πηρομελής. 60

41 φασὶ δ' αὐτὸν ἐρωτηθέντα ὑπὸ τῶν μαθητῶν εἴ τι ἐπι-
σκήπτει, εἰπεῖν ἐπισκήπτειν μὲν ἔχειν οὐδέν, πλὴν ὅτι
“πολλὰ τῶν ἡδέων ὁ βίος διὰ τὴν δόξαν καταλαζονεύεται.
ἡμεῖς γὰρ ὁπότε ἀρχόμεθα ζῆν, τότε ἀποθνήσκομεν. οὐδὲν 65
οὖν ἀλυσιτελέστερόν ἐστι φιλοδοξίας. ἀλλ' εὐτυχεῖτε, καὶ
ἦτοι τὸν λόγον ἄφετε, πολὺς γὰρ ὁ πόνος, ἢ καλῶς αὐτοῦ
πρόσστητε, μεγάλη γὰρ ἡ δόξα. τὸ δὲ κενὸν τοῦ βίου πλέον

55 Suda, s.v. Θ. (no. 199 pars 2 p.701.29 Adler)

57–60 Anthologia Palatina 7.110

59–60 Suda, s.v. Θ. (no. 200 pars 2 p.702.1–2 Adler)

61–70 Arsenius, *Violetum* p.296.6–16 Walz, *parvis cum mutationibus*

64 Cicero, *Tusc. disp.* 3.69, *ex quo, ut videtur, pendent Hieronymus, Epist.* 52 ad Nepotianum, Gualterus Burlaeus, *Liber de vita et moribus philosophorum* 68 (p.286.1–2 Knust), Vincentius Beluacensis, *Spec. hist.* 5.2 (t.4 p.138 ed. Duacensis a. 1624), Fr. Petrarca, *Familiares res* 1.8.4 et Io. Ludovicus Vives, *In ps.-dialectos* (t.3 p.57 Majansio ed Valenciana a. 1782) et *De veritate fidei christianae* 1 (t.8 p.37 Majansio ed. Valenciana a. 1790); *vid. etiam Senecae librum De brevitae vitae* 3, quo loco verba perperam Aristoteli attribuuntur

65 Arsenius, *Violetum* p.295.19–20 Walz

δὴ BFPCoV: δὲ QW

55 ὀλίγον aW: ὀλίγων V

post ἀνῆκε B add. τῆς φράσεως θεσπέσιον Ἀριστοτέλης μετωνόμασεν ex 5.38, quae verba m. rec. del.

64 ἀρχόμεθα Stephanus: ἡρχόμεθα aWV

66 αὐτοῦ FCo: αὐτῷ BPQWV

τοῦ συμφέροντος. ἀλλ' ἐμοὶ μὲν οὐκέτ' ἐκποιεῖ βουλευέ-
εσθαι τί πρακτέον, ὑμεῖς δ' ἐπισκέψασθε τί ποιητέον.”
ταῦτα, φασίν, εἰπὼν ἀπέπνευσε. καὶ αὐτόν, ὡς ὁ λόγος,
Ἀθηναῖοι πανδημεὶ παρέπεμψαν ποσὶ τὸν ἄνδρα
τιμήσαντες. Φαβωρίνος δέ φησι γηράσαντα αὐτόν ἐν
φορείῳ περιφέρεσθαι· καὶ τοῦτο λέγειν “Ἑρμιππον
παρατιθέμενον ἱστορεῖν Ἀρκεσίλαον τὸν Πιταναῖον ἐν οἷς
ἔφασκε πρὸς Λακύνδην τὸν Κυρηναῖον.

70

75

- 42 καταλέλοιπε δὲ βιβλία καὶ αὐτὸς ὅτι μάλιστα
πάμπλειστα, ἃ καὶ αὐτὰ ἄξιον ἡγησάμην ὑπογράψαι διὰ τὸ
πάσης ἀρετῆς πεπληρωσθαι. ἔστι δὲ τάδε·

Ἀναλυτικῶν προτέρων ἀβ' γ'

Ἀναλυτικῶν ὑστέρων ἀβ' γ' δ' ε' ζ'

80

70–1 *cf.* D.L. 3.41

72–3 *Favorinus fr.53 Mensching*

72–5 *Hermippus fr.53 Wehrli*

76–7 *cf.* *Sudam, s.v. Θ.* (no. 199 pars 2 p.701.30 Adler)

79 *Alex. Aphr., In Arist. An. pr. 1.9 30a9 (CIAG t.2.1 p.123.18), 1.13 32a18 (p.156.29), 1.29 45b19 (p.326.21 et 328.2), 1.44 50a16 (p.388.17) et Suda, s.v. Θ.* (no. 199 pars 2 p.701.31 Adler) *eandem inscriptionem habent ut D.L.; Alex. Aphr., In Arist. An. pr. 1.44 50a39 (CIAG t.2.1 p.390. 1–2) et Philop., In Arist. Cat. prooem. (CIAG t.13.1 p.7.20) Ἀναλυτικά; de Ptolemaeo pinacographo vid. Gutas cat. no. 3 80 Alex Aphr., Quaestiones 1.26 (CIAG t.2.2 p.42.28) et Suda, s.v. Θ.* (no. 199 pars 2 p.701.32 Adler) *eandem inscr. habent ut D.L.; Galen, De Hipp. et Plat. placitis 2.2.4*

70 φασίν BPQCoWV: *om.* F

ὁ FP^{sl} V: *om.* BP^{ac} QCoW

71 ποσὶ aWV: οὕτωςι Ménage

75 Λακύνδην FPQCoWV: Ἀλκύνδην B

76 καταλέλοιπε FPQCoWV: κατέλοιπε B: κατέλιπε cT
καὶ αὐτὸς BPQCoWV: *om.* F: καὶ αὐτὰ Ménage

76–7 ὅτι μάλιστα πάμπλειστα BPQCoWV: πλείστα F

77 ἃ BPQCoWV: *om.* F

αὐτὰ aWV: αὐτὸς c

- Περὶ ἀναλύσεως συλλογισμῶν α΄
 Ἀναλυτικῶν ἐπιτομὴ α΄
 Ἀνηγμένων τόπων α΄β΄
 Ἀγωνιστικῶν <ῆ> τῆς περὶ τοὺς ἐριστικούς λόγους θεω-
 ρίας 85
 Περὶ αἰσθήσεων α΄
 Πρὸς Ἀναξαγόραν α΄
 Περὶ τῶν Ἀναξαγόρου α΄
 Περὶ τῶν Ἀναξιμένους α΄
 Περὶ τῶν Ἀρχελάου α΄ 90
 Περὶ ἁλῶν, νίτρου, στυπτηρίας α΄
 Περὶ τῶν αἰθομένων α΄β΄

(CMG t.5.4.1.2 p.104.3–5) Δευτέρων ἀναλυτικῶν

81 *Alex. Aphr., In Arist. An. pr. 1.31 46b40 (CIAG t.2.1 p.340.21) eandem inscr. habet ut D.L.; Suda, s.v. Θ. (no. 199 pars 2 p.701.32 Adler) Ἀναλύσεως συλλογισμῶν; cf. D.L. 5.45 v.170 et 5.47 v.216*

82 *Suda, s.v. Θ. (no. 199 pars 2 p.701.32 Adler)*

83 *Suda, s.v. Θ. (no. 199 pars 2 p.701.32–3 Adler) eandem inscr. habet ut D.L.; Alex. Aphr., In Arist. An. pr. 1.31 46b40 (CIAG t.2.1 p.340.14) τὰ Θεοφράστου δύο τὰ ἐπι- γραφομένα Ἀνηγμένων λόγων εἰς τὰ σχήματα*

86 *incertum quemadmodum hoc opus ad fr.1 Wimmer et Physicas Opiniones (5.48 v.251) et librum De anima (5.46 v.188) pertineat; Priscianus Lydus, Metaphr. in Theophr., prooem. (Suppl. Arist. t.1.2 p.1.2–3) Περὶ αἰσθήσεως; de locis Arabicis vid. Gutas cat. no. 7*

88 *Simplicius In Arist. Phys. 1.4 187b13 (CIAG t.9 p.166. 17)*

83 τόπων aWV: λόγων *Alex. Aphr.*

84 Ἀγωνιστικῶν FPQCoWV: Ἀγωνιστικὸν B

<ῆ> τῆς Schmidt: τῆς aWV: <ῆ> τῶν Usener: ῆ pro τῆς Bocheński

τοὺς om. F

86 αἰσθήσεων BFPQCo^{pc} WV: αἰσθήσεως Co^{ac} dc

90 α΄ BFPQCoW: om. V

92 αἰθομένων Rose: αἰθουμένων B: λιθουμένων FPQCoWV:

Περὶ τῶν ἀτόμων γραμμῶν α'
 Ἀκροάσεως α'β'
 Περὶ ἀνέμων α'
 Ἀρετῶν διαφοραὶ α'
 Περὶ βασιλείας α'
 Περὶ παιδείας βασιλέως α'

93 *opus in corpore Aristotelico 968a1–972b34 invenitur; Aristoteli attribuunt Simpl., In Arist. Phys. 3.6 206a14 (CIAG t.9 p.432.3–4) et Ptolem., Index scriptorum Aristotelis, no. 10 (Düring p.222); Theophrasto attribuunt Simpl., In Arist. De caelo 3.1 299a11–17 (CIAG t.7 p.566.25–6) et Philop., In Arist. De gen. et corr. 1.2 316b16–19 (CIAG t.14.2 p.34.2–3), quorum uterque scribit Περὶ τῶν ἀτόμων γραμμῶν ὃ τινες εἰς Θεόφραστον ἀναφέρουσι, et Themistius, In Arist. De caelo, versio Latina 3.1 299a6–17 (CIAG t.5.4 p.149.1) De insectilibus lineis, quem nonnulli Theophrasto ascribunt*

94 *Galen, De subst. nat. fac. (t.4 p.758.2–9 Kühn) Ἀκροάσεις; cf. D.L. 6.95*

95 *fr.5 Wimmer et Alex. Aphr., In Arist. Meteor. 2.5 361b 30–5 (CIAG t.3.2 p.97.10–11) eandem inscr. habent ut D.L.; Prisc. Lyd., Sol. ad Chosr. (Suppl. Arist. t.1.2 p.42.6) De ventis*

96 *cf. D.L. 5.46 v.192 et 5.50 v.296*

97 *Dion. Hal., Antiq. Rom. 5.73.3, Plut., Themist. 25 et Pap. Oxy. 13.611 fr.1 = Pack² 2290 eandem inscr. habent ut D.L.; Photius, Lexicon, s.v. τῖαρα (t.2 p.213.22 Naber), schol. in Plat. Remp. 8 533C (p.260.8 Greene) et Suda, s.v. τῖαρα (no. 547 pars 2 p.544.30 Adler) Περὶ βασιλείας Κυπρίων; cf. D.L. 5.47 v.219 et 5.49 v.262 etiam Cic., De fin. 5.11 cumque uterque eorum (sc. Aristoteles et Theophrastus) docuisset qualem in republica principem esse conveniret*

<ἀπολε>λιθωμένων Usener: <ἀπο>λιθουμένων Regenbogen

93 *τῶν BPQCoWV: om. F*

94 *Ἀκροάσεως aWV: Ἀκροάσεων Usener*

98 *παιδείας aW: om. V*

43	Περὶ βίων α'β'γ'	
	Περὶ γήρωσ α'	100
	Περὶ τῆς Δημοκρίτου ἀστρολογίας α'	
	Τῆς μεταρσιολεσχίας α'	
	Περὶ τῶν εἰδώλων α'	
	Περὶ χυμῶν, χροῶν, σαρκῶν α'	
	Περὶ τοῦ διακόσμου α'	105
	Περὶ τοῦ Περὶ ἀνθρώπων α'	
	Τῶν Διογένους συναγωγῇ α'	
	Διορισμῶν α'β'γ'	
	Ἑρωτικὸς α'	
	ἄλλο Περὶ ἔρωτος α'	110
	Περὶ εὐδαιμονίας α'	
	Περὶ εἰδῶν α'β'	
	Περὶ ἐπιλήψεως α'	
	Περὶ ἐνθουσιασμοῦ α'	

109 *Athen.* 13.562E, 567B et 606C

110 *Strabo* 10.4.12 478 Περὶ ἔρωτος

111 *Athen.* 12.543F et 13.567A et *Antiatticista*, s.v. κεφαλοτομεῖν (*Bekker, Anecd. Gr. t.1 p.104.31*) eandem inscr. habent ut *D.L.*; *Cicero, De fin.* 5.12 et 5.85 et *Tusc. disp.* 5.24 De beata vita

113 *Apuleius, Apologia sive De magia* 51 De caducis

114 *Athen.* 13.624A eandem inscr. habet ut *D.L.*; *Gellius, NA* 4.13, quo loco inscriptio Περὶ ἐνθουσιασμοῦ ab *Hosio* additur; *Apollonius, Hist. mirab.* 49 Περὶ ἐνθουσιασμῶν

102 Περὶ ante τῆς add. *Usener*

104 Περὶ *BPQCoWV*: Περὶ τῶν *F*

105 τοῦ *BPQCoWV*: om. *F*

106 Περὶ τοῦ Περὶ ἀνθρώπων *BPQCoWV*: Περὶ ἀνθρώπων *F*: Περὶ τοῦ Περὶ ἀνθρώπου *N*: Περὶ τοῦ ἀνθρώπου *Frob.*: Περὶ τῶν ἀνθρώπων *Meurs*

α' *BPQCoWV*: om. *F*

107 α' *BFPQWV*: μία *Co*

112 εἰδῶν *BFCoWmgV*: om. *Wac*: εἰδώλων *PQ*: ἡθῶν *Meurs*

- Περὶ Ἐμπεδοκλέους α' 115
 Ἐπιχειρημάτων α'β'γ'δ'ε'ς'ζ'η'θ'ί'α'ι'β'γ'δ'ι'ε'ς'ι'ζ'η'
 Ἐνστάσεων α'β'γ'
 Περὶ ἔκουσίου α'
 Ἐπιτομὴ τῆς Πλάτωνος Πολιτείας α'β'
 Περὶ ἑτεροφωνίας ζώων τῶν ὁμογενῶν α' 120
 Περὶ τῶν ἀθρόον φαινομένων α'
 Περὶ δακετῶν καὶ βλητικῶν α'
 Περὶ τῶν ζώων ὅσα λέγεται φθονεῖν α'
 Περὶ τῶν ἐν ξηρῷ διαμενόντων α'
 44 Περὶ τῶν τὰς χροῶς μεταβαλλόντων α' 125

116 cf. *D.L.* 5.49 v.260

120 *Athen.* 9.390A Περὶ ἑτεροφωνίας τῶν ὁμογενῶν

121 *Photius, Bibl. cod.* 278 527b11 (t.8 p.164.3 Henry)

Περὶ τῶν ἀθρόως φαινομένων ζώων

122 *Apuleius, Apol.* 41 et *Athen.* 7.314B eandem inscr. habent ut *D.L.*; *Prisc Lyd., Sol. ad Chosr.* (*Suppl. Arist.* t.1.2 p.42.6) De morsibus simul nocivis

123 *Photius, Bibl. cod.* 278 528a40 (t.8 p.166.18 Henry)

Περὶ τῶν λεγομένων ζώων φθονεῖν; *Photius, Lex., s.v. ἵππομανές* (t.1 p.296.17 Naber) Φθονερά ζῶα; *Apuleius, Apol.* 51 De invidentibus animalibus

124 fr. 171 *Wimmer* Περὶ ἰχθύων vel Περὶ τῆς τῶν ἐν τῷ ξηρῷ διαμονῆς (vid. *Burnikel, Textgesch. Untersuchungen* p.69–70); *Athen.* 7.312B–C Περὶ τῶν ἐν τῷ ξηρῷ διαιτωμένων et 7.317F Περὶ τῶν ἐν τῷ ξηρῷ διατριβόντων

125 *Athen.* 7.317F et *Photius, Bibl. cod.* 278 525a31 (t.8 p.157.17 Henry)

115 Περὶ aWV: Περὶ <τῶν> Usener

117 Ἐνστάσεων aWV: Ἐνστάσεως Ald.

120 ζώων BFPQCoW: λόγων V

121 ἀθρόον FPQCoWV: ἀθρόων B

122 Περὶ aWV: περὶ <τῶν> Meurs

α' BPQCoWV: β' F

123 φθονεῖν aWV: φρονεῖν Frob.

124 ἐν FPQCoWV: ἐν τῷ B

Περὶ τῶν φωλεονόντων α'
 Περὶ ζώων α'β'γ'δ'ε'ς'ζ'
 Περὶ ἡδονῆς ὡς Ἀριστοτέλης α'
 Περὶ ἡδονῆς ἄλλο α'
 θέσεις κδ'
 Περὶ θερμοῦ καὶ ψυχροῦ α'
 Περὶ ἰλίγγων καὶ σκοτώσεων α'
 Περὶ ἰδρώτων α'
 Περὶ καταφάσεως α' [καὶ ἀποφάσεως]

130

126 *Athen.* 2.63C, 3.105D et 7.314B

127 *Athen.* 9.387B et *Aristoph. Byz., Hist. animal. epit.* 1.98 (*Suppl. Arist. t.1.1 p.29.20–1*); cf. *D.L.* 5.50 v.304

128–9 *Athen.* 6.273C, 8.347E, 12.511C et 526D Περὶ ἡδονῆς; non solum Theophrasto sed etiam Chamaeleonti opus attribuitur 8.347E et 12.511C

130 *Athen.* 4.130D, *D.L.* 4.27 et *Aelius Theon, Progymn.* 2 (*Rh Gr t.1 p.165.4–5 Walz*); cf. *D.L.* 4.27, et 5.49 v. 261 et *Suda*, s.v. θέσεις (no.262 pars 2 p.709.8–9 Adler)

131 *Galen, In Hipp. Aphorismos* 14 (t.17.2 p.405.2–3 Kühn)

132 fr.8 Wimmer et Photius, *Bibl. cod.* 278 526a32 (t.8 p.160.16 Henry) Περὶ ἰλίγγων

133 fr.9 Wimmer et Photius, *Bibl. cod.* 278 528b28 (t.8 p.167.15 Henry)

134 *Alex. Aphr., In Arist. An. pr.* 1.1 24a16 (*CIAG t.2.1 p.11.16–17*), 1.4 26a39 (p.66.7), 1.37 49a6 (p.367.13–14), 1.41 49b27 (p.378.20) 1.41 49b30 (p.379.9), *In Arist. Metaph.* 3.4 1006a11 (*CIAG t.1 p.273.18*), *In Arist. Top.* 3.6 120a20 (*CIAG t.2 p.290.28–9*) Περὶ καταφάσεως; *Galen, De libr. propr.* 11 (p.118.13–16 Mueller) et 14 (p.123.2–3) Περὶ καταφάσεως καὶ ἀποφάσεως; *Boethius, In Arist. De interpr. sec. ed.* 1 praef. (p.9.24 et 10.26 Meiser), 1.1

127 Περὶ BPQCoWV: Περὶ τῶν F

128 ἡδονῆς BFPQWV: ἡδονῶν Co

133 ἰδρώτων F: ἰδρώτος BPQCoWV

134 α' aWV: post ἀποφάσεως transp. Frob. καὶ ἀποφάσεως del. Fortenbaugh

Καλλισθένης ἡ περὶ πένθους α'

135

Περὶ κόπων α'

Περὶ κινήσεως α'β'γ'

Περὶ λίθων α'

Περὶ λοιμῶν α'

Περὶ λειποψυχίας α'

140

Μεγαρικὸς α'

Περὶ μελαγχολίας α'

Περὶ μετάλλων α'β'

(p.12.5-6) et 2.5 (p.102.25-6) De affirmatione et negatione; de locis Arabicis vid. Gutas cat. no. 2.1; cf. etiam D.L. 5.46 v.194

135 Alex. Aphr., De anima libri mant. (CIAG t.2.1 p.186.30) Καλλισθένης; Cic., Tusc. disp. 5.25 Callisthenes

136 fr.7 Wimmer et Photius, Bibl. cod. 278 527a4 (t.8 p.163.3 Henry); cf. Galen, De sanit. tuenda 3.5.2 (CMG t.5.4.2 p.84.5-9), quo tamen loco inscriptio non invenitur

137 Simpl., In Arist. Phys. 1.3 186a13 (CIAG t.9 p.107.12), 3.1 201a3-9 (p.413.1), 6.4 234b10-20 (t.10 p.964.30-1), 6.5 236a7-27 (p.986.5-6) et Themist., In Arist. Phys. 6.4 234b10-17 (CIAG t.5.2 p.192.1-2); cf. D.L. 5.49 v.268

138 fr. 2 Wimmer, Antigonius, Hist. mirab. 168 (284), Athen. 2.93A-B, Cyrillus, Lex., s.v. σάπφειρος (Cramer, Anecd. Gr. t.4 p.190.1), Photius, Lex., s.v. ἀμέθυστον (p.90.17 Reitzenstein) et τιγγαβάρι (t.2 p.217.8 Naber) et Suda, s.v. Θ. (no. 199 pars 2 p.701.33 Adler)

140 fr.10 Wimmer=Photius, Bibl. cod. 278 525b34 (t.8 p.159.6 Henry)

141 D.L. 6.22

143 Harpocratio, Lex., s.v. κεγκρέων (t.1 p.172.2-3 Dindorf) et Suda, s.v. Θ. (no. 199 pars 2 p.701.33 Adler) eandem inscr. habent ut D.L.; Alex. Aphr., In Arist. Meteor. 3.6 378b5-6 (CIAG t.3.2 p.178.14) Περὶ τῶν μεταλλευομένων; Theophrastus, De lapid. 1 περὶ μὲν οὖν τῶν μεταλλευομένων ἐν ἄλλοις τεθεωρῆται; Gennadius, In Arist.

136 κόπων BFPQCoW: κόπου V

140 λειποψυχίας FPQCoV: λιποψυχίας BW

45	Νόμων ἐπιτομῆς ἀβ'γ'δ'ε'ς'ζ'η'θ'ι'	
	Πρὸς τοὺς ὀρισμοὺς α'	150
	Περὶ ὀδμῶν α'	
	Περὶ οἴνου καὶ ἐλαίου	
	Πρώτων προτάσεων ἀβ'γ'δ'ε'ς'ζ'η'θ'ι'α'β'ι'γ'ι'δ'ι'ε'ι'ς'ι'ζ'ι'η'	
	Νομοθετῶν ἀβ'γ'	
	Πολιτικῶν ἀβ'γ'δ'ε'ς'	155
	Πολιτικῶν πρὸς τοὺς καιροὺς ἀβ'γ'δ'	

5–6), *Etymol. Magnum*, s.v. ἐν Φρεατοῖ (p.344.29 Gaisford), *Pollux*, *Onomast.* 10.19 (t.2 p.195.9 Bethe), *Proclus*, *In Plat. Remp.* (t.1 p.8.15–16 Kroll) schol. in *Plat. Leges* 11 937D (p.369.11–12 Greene) et *Suda*, s.v. Ἐμφρέατοι (no. 1080 pars 2 p.266.10 Adler), ὅτι οἱ ἀλόντες (no. 743 pars 3 p.572.25) et φαρμακός (no. 105 pars 4 p.700.18), quorum omnes verba κατὰ στοιχεῖον omittunt; vid. etiam *Cic.*, *De fin.* 5.11 a Theophrasto leges etiam cognovimus; cf. *D.L.* 5.47 v.228

151 fr.4 Wimmer, *Athen.* 2.67B et 15.689D–E, *Photius*, *Lex.*, s.v. μεγάλλειον μύρον (t.1 p.410.10–11 Naber) et *Suda*, s.v. Θ. (no. 199 pars 2 p.701.33 Adler) Περὶ ὀσμῶν; cf. *Theophr.*, CP 6.20.4

155 *Harpocratio*, *Lex.*, s.v. Ἀσπασία (t.1 p.62.6 Dindorf); cf. *tabulam Arist. scriptorum ap. D.L.* 5.24 Πολιτικῆς ἀκροάσεως ὡς ἡ Θεοφράστου ἀβ'γ'δ'ε'ς'ζ'η' et infra 5.50 v.301

156 *Harpocratio*, *Lex.*, s.v. ἐπίσκοπος (t.1 p.129.8–9 Dindorf) πολιτικῶν τῶν πρὸς καιροῦς; *catalogus Plutarchi librorum*, qui sub nomine *Lampriae* fertur no. 52–3 Πρὸς τοὺς καιροὺς πολιτικῶν; et *Parthen.*, *Narr. amat.* 9 et 18 Πρὸς τοὺς καιροῦς; *Pausanias Atticista*, s.v. ἀρχὴ σκυρία (*H. Erbse*, *Abh.* Berlin, *phil.-hist. Kl.*, 1949.2, p.166.1 no. 159 [78]), *Suda*, s.v. ἀρχὴ σκυρία (no. 4101 pars 1 p.374.1–2 Adler), *Apostol.*, *Prov.* 3.80 (*Corp. Paroem. Gr.* t.2 p.306.

151 ὀδμῶν aVW: ὀσμῶν DGS

154 Νομοθετῶν aVW: <Πολιτεύματα> νομοθετῶν Usener

156 Πολιτικῶν aVW: Πολιτικὸν Meibom

ἀβ'γ'δ' BFP^{pc} V: ἀβ'γ'δ'ε' Pac QCoW

Περὶ μέλιτος α'

Περὶ τῶν Μητροδώρου συναγωγῆς α' ,

Μεταρσιολογικῶν α'β'

Περὶ μέθης α'

Νόμων κατὰ στοιχεῖον κδ'

145

Meteor. 3.6 378b5–6 (*t.*7.2 *p.*481.18 *Petit, Siderides et Jugie*) Περὶ μεταλλευτῶν; *Olymp.* In *Arist. Meteor.* 3.6 377a29 (*CIAG t.*12.2 *p.*266.36), *quo loco Theophrastus περὶ ἐκάστου μετάλλου scripsisse dicitur; Hesychius, Lex., s.v. προσφανῇ* (*no.*3920 *t.*3 *p.*392.30 *Schmidt*) *et Pollux, Onomast.* 10.149 (*t.*2 *p.*234.25 *Bethe*) ἐν τῷ Μεταλλικῷ; *idem* 7.99 (*t.*2 *p.*80.3–5) *Aristoteli aut Theophrasto* Περὶ μετ-
άλλων *attribuit; Simpl., In Arist. De caelo* 1 *prooem.* (*CIAG t.*7 *p.*3.2), *Philop., In Arist. Phys.* 1 *prooem.* (*CIAG t.*16 *p.*2.1), *In Arist. De gen. et corr.* 1 *prooem.* (*CIAG t.*14.2 *p.*2.18) *et Olymp., In Arist. Meteor.* 1.1 338a20 (*CIAG t.*12.2 *p.*6.6) Περὶ μετάλλων *Aristoteli attribuunt; Simpl., In Arist. Phys.* 1 *prooem.* (*CIAG t.*9 *p.*3.4) Περὶ μετάλλων *auctoris sine nomine; Hesych., Lex., s.v. σκαρφῶν* (*no.* 874 *t.*4 *p.*40.10 *Schmidt*) *et σύζωσμα* (*no.* 2212 *t.*4 *p.*92.22) *Μεταλλικόν auctoris sine nomine*

144 *Photius, Bibl. cod.* 278 529b11 (*t.*8 *p.*169.25 *Henry*)
Περὶ μελίτων

146 *Plut., Quaest. Gr.* 7 292C ἐν τετάρτῃ Περὶ μεταρσίων;
fort. excerptum Syriacum ex hoc opere ed. Wagner et Stein-
metz, Abh. Mainz 1964; *cf. D.L.* 5.47 v.221

147 *Athen.* 10.423F, 427D, 11.463D, 465B, 497E *et* 15. 693C

148 *Harpocratio, Lex., s.v. ἀποβάτης* (*t.*1 *p.*45.9 *Dindorf*),
ἐν Φρεαττοῖ (*p.*115.20), ἐφορία (*p.*143.8), θεσμοθέται (*p.*
153.5), ἰσοτελῆς (*p.*163.9–10), καταχειροτονία (*p.*172.6),
ὅτι οἱ ἀλόντες (*p.*228.3), παρασκήνια (*p.*239.9), σκαφηφό-
ροι (*p.*275.9), ὑποφόνια (*p.*297.11), φαρμακῶντα (*p.*299.

145 Περὶ αWV: *del. Usener*

συναγωγῆς BFPCoV: συναγωγῶν QV: συναγωγή Burn
α' αWV: β' c

148 Νόμων BPQCoWV: Περὶ νόμων F

Πολιτικῶν ἐθῶν ἀβ'γδ'
 Περὶ τῆς ἀρίστης πολιτείας α'
 Προβλημάτων συναγωγῆς ἀβ'γδ'ε'
 Περὶ παροιμιῶν α' 160
 Περὶ πῆξεων καὶ τήξεων α'
 Περὶ πυρὸς ἀβ'
 Περὶ πνευμάτων α'
 Περὶ παραλύσεως α'
 Περὶ πνιγμοῦ α' 165

11), quibus locis Theophrastus ἐν τοῖς πρώτοις καιροῖς citatur; cf. D.L. 5.50 v.292 et quoque Cic., *De fin.* 5.11 quae essent in re publica rerum inclinationes et momenta temporum quibus esset moderandum utcumque res postularet 158 Cicero, *De fin.* 5.11 qui esset optimus rei publicae status; cf. D.L. 5.49 v.276

159 Anon., *In Arist. An. pr.* 2.15 98a24 (CIAG t.13.3 p.590. 7–8) Περὶ τὴν συναγωγὴν τῶν ὁμοίων προβλημάτων; Alex. Aphr., *In Arist. Top.* 1.5 102a 1–18 (CIAG t.2.2 p.45.11) Τὰ περὶ τοῦ αὐτοῦ προβλήματα; de locis Arabicis vid. Gutas cat. no. 9; cf. D.L. 5.47 v.236, 5.48 vv.238–9 et 5.49 v.279

160 Harpocratio, *Lex.*, s.v. ἀρχὴ ἄνδρα δείκνυσιν (t.1 p.61.2 Dindorf), Stobaeus, *Anthol.* 3.21.12 (t.3 p.558.15 Hense), *Mantissa Proverbiorum* 1.43 (Corp. Paroem. Gr. t.2 p.750. 7–8) et Arsenius, *Violetum* p.165.8–9 Walz, quorum omnes eandem inscr. habent ut D.L.; Apost., *Prov. cent.* 4.1 (Corp. Paroem. Gr. t.2 p.310.10) et Arsen., *Viol.* p.76.19 Walz ἐν τῷ Παροιμιῶν

162 fr.3 Wimmer; [Arist.], *Probl.* 30.1 954a21 auctore non nominato

164 Photius, *Bibl. cod.* 278 525b22 (t.8 p.158.22 Henry)

165 Athen. 2.66F eandem inscr. habet ut D.L.; Oribasius,

157 Πολιτικῶν ἐθῶν ἀβ'γδ' BPQCoWV: Πολιτικῶν ε' F

158 om. Fac

159 om. Fac

163 πνευμάτων aWV: πνεύματος Meurs

165 α' aWV: α'β' Ald.

- 46 Περὶ φιλοτιμίας α'β'
 Περὶ φύσεως α'β'γ'
 Περὶ φυσικῶν α'β'γ'δ'ε'ς'ζ'η'θ'ι'α'ι'β'ι'γ'ιδ'ι'ε'ι'ς'ι'ζ'ι'η'
 Περὶ φυσικῶν ἐπιτομῆς α'β'
 Φυσικῶν α'β'γ'δ'ε'ς'ζ'η'
 Πρὸς τοὺς φυσικοὺς α'
 Περὶ φυτικῶν ἱστοριῶν α'β'γ'δ'ε'ς'ζ'η'θ'ι'

180

Spec. hist. 5.2 (p.138 ed. Duac. a. 1624) et Gualterus Bur-
 laeus, *De vita et moribus philosophorum* 68 (p.284.11
 Knust) *De amicitia*

178 *Cicero, Epist. ad Att.* 2.3.14, quo tamen loco codd. φιλο-
 τείας vel φιλοθείας habent quod Victorius φιλοτιμίας emend.

179 *Philop., In Arist. Phys.* 1.1 184a10-12 (CIAG t.16
 p.4.8-9) eandem inscr. habet ut D.L.; Priscianus Lydus, *Sol.*
ad Chosr. (Suppl. *Arist.* t.1.2 p.42.5) Naturalis auditus; cf.
 D.L. 5.50 v.302

180 *Alex. Aphr., In Arist. Metaph.* 1.3 984b3-4 (CIAG t.1
 p.31.7-8) = DG p.482.6 Περὶ τῶν φυσικῶν

181 D.L. 9.21 = DG p.482.15 ἐν τῇ Ἐπιτομῇ; cf. D.L. 5.48
 v.252

182 *Simpl., In Arist. Cat.* 14 15b1 (CIAG t.8 p.435.27), *In*
Arist. Phys. 1.1 184a10-16 (CIAG t.9 p.9.7), 1.1 184a16-
 b14 (p.20.20), *Coroll. de loco* (p.604.5-6 et 639.14), 5.2
 226a23-6 (t.10 p.860.19-20), 8.5 257b6-13 (p.1236.1), *In*
Arist. De caelo 3.1 299a2-11 (CIAG t.7 p.564.24) = DG
 p.491.19, *In Arist. De anima* 2.7 419a13 (CIAG t.11 p.136.
 29), 3.9 432a15 (p.286.31-2), *Aëtius* 2.20.3 (DG p.
 348b12) = *Stobaeus, Ecl.* 1.25.1b (t.1 p.207.23 Wachsmuth)
 = DG p.492.4-5, D.L. 9.22 = DG p.483.2 et *Themistius, In*
Arist. De anima 6, 3.5 430a25 (CIAG t.5.3 p.108.11)

183 *Plut., Adv. Colot.* 14 1115A

184 *Athen.* 1.31E, 2.61E (bis), 3.82E, 83D, 11.470F, 15.

181 om.F

182 Φυσικῶν α'β'γ'δ'ε'ς'ζ'η' BPQCoVV: ἔτ<ε>ρ<ον> Περὶ
 φυσικῶν η' F

183 om. W^{ac}

184 φυτικῶν Casaubon: φυσικῶν aW^{mg}V: om. W^{ac}

Περὶ παραφροσύνης α'	
Περὶ παθῶν α'	
Περὶ σημείων α'	
Σοφισμάτων α'β'	
Περὶ συλλογισμῶν λύσεως α'	170
Τοπικῶν α'β'	
Περὶ τιμωρίας α'β'	
Περὶ τριχῶν α'	
Περὶ τυραννίδος α'	
Περὶ ὕδατος α'β'γ'	175
Περὶ ὕπνου καὶ ἐνυπνίων α'	
Περὶ φιλίας α'β'γ'	

Synopsis 8.59 (CMG t.6.3 p.270.1) Περὶ ἀπαγχομένων, *sed incertum, sive inscr. Theophrasto sive Oribasio adsignanda sit*

167 *Simpl.*, In *Arist. Cat.* 8 8b26 (CIAG t.8 p.235.9)

168 *fr.6 Wimmer et Proclus*, In *Plat. Tim.* 40C–D (t.3 p.151.9 Diehl)

170 *cf. D.L.* 5.42 v.81 et 5.47 v.216

171 *Alex. Aphr.*, In *Arist. Metaph.* 4.10 1018a25 (CIAG t.1 p.381.13), 4.15 1021a31 (p.408.18–19), In *Arist. Top.* 1.6 102b27 (CIAG t.2.2 p.55.24) et *Simpl.*, In *Arist. Cat.* 11 14a19 (CIAG t.8 p.415.15–16); *de locis Arabicis vid. Gutas cat. no. 4; cf. D.L.* 5.50 v.282

175 *Alex. Aphr.*, In *Arist. De sensu* 4 441b3–7 (CIAG t.3.1 p.72.4) *eandem inscr. habet ut D.L.; Theophrastus, De ventis* 5, *Anon.*, In *Antimachum Colophonium*, col. II.53 (ed. Vogliano, *PRIMI* 1.17 = Pack² 89), *Athen.* 2.41E, *Antigonos, Hist. mirab.* 158 Περὶ ὑδάτων

176 *Prisc. Lyd.*, *Sol. ad Chosr.* (*Suppl. Ar.* t.1.2 p.42.5–6) *De somno et somniis*

177 *Gellius*, *NA* 1.3.10, *ex quo pendent, ut videtur, Hieron.*, In *Michaeam* 2.7 (CCSL t.76 p.509), *Vincent. Beluacensis*,

170 Περὶ συλλογισμῶν λύσεως α' *BF^{mg}PQCoWV: om. Fac: Συλλογισμῶν λύσεως α' Frob.: Περὶ συλλογισμῶν <ἀνα>λύσεως α' Usener*

171 *om. Fac*

172 *om. F*

681E, Galen, *De alim. fac.* 1.28.2 (CMG t.5.4.2 p.254.18–23) Περὶ φυτῶν ἱστορίας; Athen. 2.66E, 3.77A (bis) et Varro, *De re rust.* 1.5.1 Φυτῶν ἱστορίας; Athen. 3.77B et F et 15.679C Φυτικῆς ἱστορίας; Apollon., *Hist. mirab.* 16, 29, 31–3, 41, 43, 47–48 et 50, Athen. 2.41F, 50B, 56F, 70D, 3.72B, 77E et 14.651A, Alex. Aphr., *In Arist. De sensu* 4 442b24–6 (CIAG t.3.1 p.87.11), Galen, *In Hipp. Epidem.* 6 (3.14 CMG t.5.10.2.2 p.144.4–5), Ling. Hipp. expl. s.v. ἀκόνην (t.19 p.72.16–18 Kühn) et γόγγρωνα (p.91.10), *De alim. fac.* 1.13.11 (CMG t.5.4.2 p.237.21–238.3), Harpocration, *Lex.*, s.v. μελίνη (t.1 p.202.5 Dindorf) et ὀλοσχοίνω (p.221.14–15), schol. in Plat. *Remp.* 6 488C (p.238.4–5 Greene), schol. in Apoll. Rhod. *Argonaut.* 1.879–83 (a, p.74.17–18 Wendel), schol. in Nicand. *Ther.* 615 (b, p.231.12–14 Crugnola) et 645 (a, p.241.1–3), Steph. Byz., *Ethnica*, s.v. ἄψυνθος (p.153.10–11 Meineke), Suda, s.v. Θ. (no. 199 pars 2 p.701.33 Adler) et μελίνη (no. 507 pars 3 p.365.11) Περὶ φυτῶν; *Lexica Segueriana*, s.v. ἀκαλήφη (Bachmann, *Anecd. Gr.* t.1 p.60.25) Φυτῶν; Athen. 2.54.F, 61F et 67D, Erotianus fr.29 (p.107.15–17 Nachmannson), schol. in Homer. *Od.* 10.510 (t.1 p.476.15 Dindorf), schol. in Nicand. *Alexiph.* 99 (p.337.10–11 Bianchi), Photius, *Lex.*, s.v. ἀκαλήφη (p.58.5–6 Reitzenstein), Suda, s.v. ἀκαλήφη (no. 788 pars 1 p.75.8–9 Adler) et schol. in Oribasii *Coll. Medic.* 11A54 (CMG t.6.1.2 p.89.18) et 11A70 (p.92.1) Φυτικῶν; Pollux, *Onomast.* 10.170 (t.2 p.240.30 Bethe), quo loco verba ἐν Ἀριστοτέλους ἢ Θεοφράστου Φυσικοῖς (sic) inveniuntur, sed de plantis disputatur; Athen. 3.81F–82A Ἱστορίας; Thomas Aquinas, *De sensu et sensato*, lect. 11 art. 161 (p.48b40–2 Spiazzi) De plantis; cf. Cic., *De fin.* 5.10 Theophrastus (persecutus est) autem stirpium naturas omniumque fere rerum quae e terra gignerentur causas atque rationes

185 opus exstat sed tantum sex libros; Apollon, *Hist. mirab.*

ἱστοριῶν FQ: ἱστορικῶν BPCoW^{mg}V: om. Wac

185 Φυτικῶν Casaubon: <Περὶ>φυτικῶν Meibom: Φυσικῶν

Περὶ χυλῶν α'β'γ'δ'ε'	
Περὶ ψευδοῦς ἡδονῆς α'	
Περὶ ψυχῆς θέσις α'	
Περὶ τῶν ἀτέχνων πίστεων α'	
Περὶ τῶν ἀπλῶν διαπορημάτων α'	190
Ἀρμονικῶν α'	
Περὶ ἀρετῆς α'	
Ἀφορμαὶ ἢ ἐναντιώσεις α'	
Περὶ ἀποφάσεως α'	
Περὶ γνώμης α'	195
Περὶ γελοίου α'	
Δειλινῶν α'β'	
Διαιρέσεις α'β'	

46, Athen. 3.74A et 77C, Varro, *De re rust.* 1.5.1, Clem. Alex., *Strom.* 3.3.24.3 (GCS t.52[15] p.207.2) eandem inscr. habent ut D.L.; Athen. 2.55E (bis) Αἰτίων φυσικῶν (sic), sed de plantis disputatur; Athen. 3.77F Αἰτίων; de locis Arabicis vid. Gutas cat. no. 8; cf. etiam Cic., *De fin.* 5.10 (vid. supra v.184)

186 Theophrastus, HP 1.12.1, eandem inscr. habet ut D.L.; Galen, *Adv. Lycum* 4.6–7 (CMG t.5.10.3 p.15.16–18) Περὶ χυλοῦ; cf. Theophr., CP 6.20.4

188 conferendus Themistius, In Arist. *De an.* 3.5 430a25 (CIAG t.5.3 p.108.11) Περὶ ψυχῆς, sed haec inscriptio ad aliud opus attinere videtur; de locis Arabicis vid. Gutas cat. no. 6

192 cf. D.L. 5.42 v.96 et 5.50 v.296

194 cf. D.L. 5.44 v.134

196 Athen. 8.348F

BPQCoW^{mg}V: om. FW^{ac} (tota inscriptio omittitur)

188 θέσις FPQCoVW: Θέσεις B

α' aW: μία V: μα' Meurs

189 τῶν BFPCoWV: om. Q α' dc: om. aWV

192 om. F

194 ἀποφάσεως BFPQWV: ἀποφάσεων Co: ἀποφά<ν>-σεως Usener

197 Δειλινῶν BQ: Δειληνῶν FPCoWV

	Περὶ τῶν διαφορῶν α'	
	Περὶ τῶν ἀδικημάτων α'	200
	Περὶ διαβολῆς α'	
	Περὶ ἐπαίνου α'	
	Περὶ ἐμπειρίας α'	
	Ἐπιστολῶν α'β'γ'	
	Περὶ τῶν αὐτομάτων ζώων α'	205
	Περὶ ἐκκρίσεως α'	
47	Ἐγκώμια θεῶν α'	
	Περὶ ἑορτῶν α'	
	Περὶ εὐτυχίας α'	
	Περὶ ἐνθυμημάτων α'	210
	Περὶ εὐρημάτων α'β'	

199 *Athen.* 7.317F Περὶ τῶν κατὰ τόπους διαφορῶν

201 *cf. D.L.* 5.49 v.265 et 5.50 v.288

204 *Photius, Bibl. cod.* 190 148b20 (t.3 p.57.27 Henry); *vid. schol. in Apoll. Rh. Argonaut.* 1.972 (a, p.85.12–13 *Wendel*) ἐν τῇ πρὸς Φανίαν ἐπιστολῇ; *cf. D.L.* 5.37 vv.20–1 et 5.50 v.289

210 *Marcellinus (?)*, *Proll. in Hermogenis De statibus* (*RhGr* t.14 p.292.28–9 *Rabe*) Τέχνη ῥητορικὴ περὶ ἐνθυμημάτων; *cf. D.L.* 5.48 v.246

211 *Clem. Alex., Strom.* 1.16.77.1 (*GCS* t.52[15] p.50.10–14) *idem ap. Euseb., Praep. evang.* 10.6.4 (*GCS* t.43.2 p.517.14–19), *schol. in Homer. Il.* 1.449 (t.1 p.55.22–5 *Dindorf*) et *schol. in Pindar. Olymp.* 13.27 (c, t.1 p.362.23–4 *Drachmann*) eandem *inscr. habent ut D.L.*; *Geo. Choeroboscus, In Hephaest. Enchiridion* 10.2 (p.240.20 *Consrubach*) Περὶ εὐρήσεως

199 Περὶ τῶν διαφορῶν α' *BPQCoWV*: *om. Fac*: Περὶ διαφορῶν α' *Fmg*: Περὶ τῶν <κατὰ τόπους> διαφορῶν α' *Ussener, qui Athen. confert*

200 Περὶ τῶν <δικαιωμάτων (vel δικαιοπραγημάτων) καὶ τῶν> ἀδικημάτων *dubitanter coni. Fortenbaugh, coll. Arist. Rhet.* 1373b1 et *EN/EE* 1135a8–15

203 α' *om. B*

206 ἐκκρίσεως *aWV*: ἐκκρίσεων *h*

Ἠθικῶν σχολῶν α'	
Ἠθικοὶ χαρακτῆρες α'	
Περὶ θορύβου α'	
Περὶ ἱστορίας α'	215
Περὶ κρίσεως συλλογισμῶν α'	
Περὶ θαλάττης α'	
Περὶ κολακείας α'	
Πρὸς Κάσανδρον περὶ βασιλείας α'	
Περὶ κωμωδίας α'	220

212 Anon., *In Arist. EN 5.1 1129b29–30* (CIAG t.20 p.210.16), *Aspasius, In Arist. EN 7.15 1154b6–15* (CIAG t.19.1 p.156.17), *Michael Ephesius, In Arist. EN 5.1 1129b29–30* (CIAG t.22.3 p.8.13) et *Plut., Pericles 38.2 Ἠθικά*, sed haec *inscr. ad aliud opus attinere videtur*; *Fulgentius, Mitologiae 2.1* (p.39 Helm) *Moralia, quae inscr. ad aliud opus attinet ut videtur*

213 *opus exstat et cod. Ven. Nan. 266 eandem inscr. habet ut D.L. (cf. etiam D.L. 5.48 v.254); cod. Barb. Gr. 374, Leidensis 107 et Rhedigeranus 22 Χαρακτῆρες περὶ ἰδιωμάτων; cod. Par. Gr. 1983, 2977 et al. et Tzetzes, Hist. 9.934 Χαρακτῆρες; incertum quomodo hoc opus attineat ad librum Περὶ ἡθῶν, quem Anon., In Arist. EN 4.2 1121a7 (CIAG t.20 p.180.17 = Cramer, *Anecd. Gr. t.1 p.194*) et 5.1 1129b29–30 (p.210.15–17), Michael Ephesius, In Arist. EN 5.1 1129b29–30 (CIAG t.22.3 p.8.12) et Adrastus ap. Athen. 15.673E citant*

216 *cf. D.L. 5.42 v.81 et 5.45 v.170*

218 *Athen. 6.254D–E*

219 *Athen. 4.144E, quo tamen loco opus etiam Sosibio ascribitur; cf. D.L. 5.42 v.97 et 5.49 v.262*

220 *Athen. 6.261D*

214 α' F: om. BPQCoWV

215 om. F

217 κινήσεως ante θαλάττης add. Usener α' aV: β' W

219 Πρὸς Κάσανδρον περὶ βασιλείας α' PQCoWV: Πρὸς Κάσανδρον Περὶ Βασιλείας α' B: Περὶ βασιλείας α' Προς Κάσανδρον α' F

Περὶ μετεώρων α'
 Περὶ λέξεως α'
 Λόγων συναγωγή α'
 Λύσεις α'
 Περὶ μουσικῆς α'β'γ'
 Περὶ μέτρων α'
 Μεγακλῆς α'
 Περὶ νόμων α'

225

221 *Olymp.*, In *Arist. Meteor.* 1.13 349a12 (*CIAG* t.12.2 p.97.6–7) ἐν τοῖς οἰκείοις Μετεώροις; *Plut.*, *Quaest. Gr.* 7 292C ἐν τετάρτῃ Περὶ μεταρσίων; *de locis Arabicis* vid. *Gutas cat.* no. 5; cf. etiam *D.L.* 5.44 v. 146

222 *Dion. Hal.*, *De comp. verb.* 16 (t.2.1 p.66.12–13 *Usener et Radermacher*) et *De Lysia* 14 (t.1 p.23.16–20)

225 *Plut.*, *Quaest. conv.* 1.5 623A et *Porph.*, In *Ptolem. Harmonica* p.61.18–20 *Düring* eandem *inscr.* habent ut *D.L.*; *de loco Arabico* vid. *Gutas* Ia.3; cf. etiam *D.L.* 5.49 v.273

228 *Iosephus*, *Adv. Apion.* 1.167, *Pollux*, *Onomast.* 8.52 (t.2 p.120.32–121.1 *Bethe*), *Harpocratio*, *Lex.*, s.v. ἄρδηττος (t.1 p.57.7 *Dindorf*), ἐάν τις (p.102.12–13), κατὰ τὴν ἀγορὰν ἀψευδεῖν (p.170.19), οὐσίας δίκη (p.229.15–16), *Pausanias Atticista*, s.v. συστομώτερον σκάφης (*H. Erbse*, *Abh. Berlin, phil.-hist. Kl.*, 1949.2, p.210.18 no. 31), *Photius*, *Lex.*, s.v. συστομώτερον σκάφης (t.2 p. 191.17 *Naber*), *Zenobius*, *Prov.* 4.36 (*Corp. Paroem. Gr.* t.1 p.94.15–16), *Lexica Segueriana*, s.v. ἄρδηττος (*Bachmann, Anecd. Gr.* t.1 p.142.14), *Lex. Rhet. Cantabr.*, s.v. εἰσαγγελία

221 μετεώρων *BPQCoWV*: μέτρων *F*

222 Περὶ λέξεως α' *BF^{mg}PQCoWV*: om. *Fac*: Περὶ λέξεως δ' *Usener*

223–4 om. *Fac*

225 Περὶ μουσικῆς α'β'γ' *BF^{mg}PQCoW*: om. *Fac*: Περὶ μουσικῆς α'β'γ'δ'ε'ζ' *V*

226 ante Περὶ μέτρων *V* *transp.* vv. 261–6

Περὶ μέτρων α' *BPQCoWV*: om. *Fac*: Περὶ μετεώρων α' *F^{mg}*

	Περὶ παρανόμων α'	
	Τῶν Ξενοκράτους συναγωγῆς α'	230
	Ὅμιλητικὸς α'	
	Περὶ ὄρκου α'	
	Παραγγέλματα ῥητορικῆς α'	
	Περὶ πλούτου α'	
	Περὶ ποιητικῆς α'	235
	Προβλήματα πολιτικά, φυσικά, ἐρωτικά, ἠθικά α'	
48	Προοιμίων α'	
	Προβλημάτων συναγωγῆς α'	
	Περὶ τῶν προβλημάτων φυσικῶν α'	
	Περὶ παραδείγματος α'	240
	Περὶ προθέσεως καὶ διηγήματος α'	

(p.337.16–338.1 Nauck) et πρόστιμον (p.357.11), schol. in Demosth. Adv. Androt. 3 (p.104b16–17 Baiter et Sauppe), schol. in Luciani Timon. 30 (p.114.27 Rabe), Suda, s.v. Ἀρδήττης (no. 3807 pars 1 p.343.22 Adler), κατὰ τὴν ἀγορὰν ἀψευδεῖν (no. 820 pars 3 p.61.10–11) et συστομώτερον σκάφης (no. 1687 pars 4 p.481.28); cf. D.L. 5.44 v.148

234 Anon., In Arist. EN 4.2 1120b33–1121a17 (CIAG t.20 p.180.17) eandem inscr. habet ut D.L.; Cicero, De off. 2.56, ex quo pendent Io. Saresb., Policrat. 8.2 (PL t.199 col. 715B) et Gualterus Burlaeus, De vita et moribus philosophorum 68 (p.286.3 Knust) De divitiis

236 cf. D.L. 5.45 v.159, 5.48 vv.238–9 et 5.49 v.279; de locis Arabicis vid. Gutas cat. no. 9

238–9 vid. app. ad v.236 supra

230 συναγωγῆς FQV: ξυναγωγῆς BPCoW

232 ὄρκου aWV: ὄρμον d

233 om. F

234 α' BPQCoWV: om. F

236 πολιτικά BFPCoWV: ποιητικά Q

φυσικά, ἐρωτικά, ἠθικά α' BF^{mg}PQCoWV: om. Fac

237 Προοιμίων aWV: <Περὶ> προοιμίων Usener

239 Περὶ τῶν BPQCoW: om. F: Περὶ τοῦ V

φυσικῶν aW: φυσικοῦ V

Περὶ ποιητικῆς ἄλλο α'

Περὶ τῶν σοφῶν α'

Περὶ συμβουλῆς α'

Περὶ σολοικισμῶν α'

245

Περὶ τέχνης ῥητορικῆς α'

Περὶ τεχνῶν ῥητορικῶν εἶδη † ξα'

Περὶ ὑποκρίσεως α'

Ὑπομνημάτων Ἀριστοτελικῶν ἢ Θεοφραστίων α'β'γ'δ'
ε'ς'

250

Φυσικῶν δοξῶν α'β'γ'δ'ε'ς'ζ'η'θ'ι'α'ι'β'ι'γ'ιδ'ι'ε'ις'

246 Marcellinus (?), *Proll. in Hermogenis De statibus* (Rh Gr t.14 p.292.28–9 Rabe) Τέχνη ῥητορικὴ περὶ ἐνθυμημάτων; cf. D.L. 5.47 v.210

247 Io. Sardinianus, *In. Aphthonii Progymn.* 22.9 (p.139.6–7 Rabe) ἐν ταῖς Τέχναις

249–50 Athen. 4.173E = Arist. fr.631 Rose et 14.654D = Arist. fr.632 Rose Ἀριστοτέλης δὲ ἢ Θεόφραστος ἐν τοῖς Ὑπομνήμασι; cf. schol. in Apoll. Rhod. Argonaut. 4.834 (p.296.2 Wendel) ἐν Ἱστορικοῖς ὑπομνήμασι, sed haec inscriptio ad opus quod in hac tabula non occurrit attinere videtur

251 Taurus ap. Philop., *Adv. Proclum De aeternitate mundi* 6.8 (p.145.20–1 Rabe) et 6.27 (p.223.14–15) = DG p.485. 17 Περὶ τῶν φυσικῶν δοξῶν; *Simpl.*, In Arist. Phys. 1.3 186a24 (CIAG t.9 p.115.12) = DG p.483.8–9 et 1.4 187a21 (p.154.17) Φυσικὴ ἱστορία; *Simpl.*, In Arist. Phys. 1.4 187a12 (CIAG t.9 p.149.32) ἐν τῇ Ἱστορίᾳ; Prisc. Lyd, *Sol. ad. Chosr.* (Suppl. Ar. t.1.2 p.42.5) Naturalis historia

242–83 om. V, spatio ca. 50 litt. relicto

242 Περὶ ποιητικῆς ἄλλο α' BPQCoW: om. Fac: περὶ ποιητικῆς Fmg: Περὶ ποιητικῆς α' c

243 σοφῶν aWV: <ζ'> σοφῶν Usener

247 ῥητορικῶν aW: φρασέων ῥητορικῶν c

crucem posui: ξα' BFac Pac: ξ' Fpc: ξα' Ppc QCoW: ις' dc

249 Θεοφραστίων BPQW: Θεοφραστείων FCo: Θεοφραστικῶν Ald.

- Φυσικῶν ἐπιτομῆς α'
 Περὶ χάριτος α'
 Χαρακτῆρες ἠθικοί
 Περὶ ψευδοῦς καὶ ἀληθοῦς α' 255
 Τῶν περὶ τὸ θεῖον ἱστορίας α'β'γ'δ'έ'ς'
 Περὶ θεῶν α'β'γ'
 Ἱστορικῶν γεωμετρικῶν α'β'γ'δ'
 49 Ἐπιτομῶν Ἀριστοτέλους Περὶ ζώων α'β'γ'δ'έ'ς' 260
 Ἐπιχειρημάτων α'β'
 Θέσεις γ'
 Περὶ βασιλείας α'β'

252 Galen, *In Hipp. De natura hominis* 1.2.25 (CMG t.5.9.1 p.15.18–22) = DG p.481.20–482.1 ἐν ταῖς τῶν Φυσικῶν δοξῶν ἐπιτομαῖς; D.L. 9.21 = DG p.482.14–15 ἐν τῇ Ἐπιτομῇ; cf. D.L. 5.46 v.181

254 cf. D.L. 5.47 v.213

258 *Simpl.*, *In Arist. Phys.* 1.2 185a14 (CIAG t.9 p.60.22 et 31) et *Eutocius*, *In Archimedis De dimensione circuli* (p.228 Heiberg) Γεωμετρικὴ ἱστορία, quibus locis opus Eudemo (fr.140 et 139 Wehrli) ascribitur; *Proclus*, *In prim. Euclidis elem.*, prop. 26 theor. 17 Γεωμετρικαὶ ἱστορίαι, quo loco opus Eudemo (fr.134) ascribitur

260 cf. D.L. 5.43 v.116

261 cf. D.L. 5.44 v.130

262 *Dion. Hal.*, *Antiq. Rom.* 5.73.3, *Plut.*, *Themist.* 25 et *Pap. Oxy.* 13.1611 fr. 1.38–40 = Pack² 2290 eandem inscr.

252–7 transp. *V ad v.* 236

252 Φυσικῶν ἐπιτομῆς aWV: Φυσικῶν <δοξῶν> ἐπιτομῆς Meurs

256 τῶν BF^{pc} PQCoW: om. Fac

258 Ἱστορικῶν BPQCoW: Π<ερὶ> ἱστοριῶν F

259 Ἐπιτομῶν Ἀριστοτέλους Περὶ ζώων α'β'γ'δ'έ'ς' BW:
 Ἐπιτομῶν Ἀριστοτέλους Περὶ ζώων α'β'γ'δ'έ'ς' PQCo:
 Ἐπιτομῶν Ἀριστοτέλους πεζῶν σ' F

260–6 om. dc

260 α' β' BPQCoW: ἐπὶ τὰ F

261 γ' aWE: σ' HIY

Περὶ αἰτιῶν α'	
Περὶ Δημοκρίτου α'	
Περὶ διαβολῆς α'	265
Περὶ γενέσεως α'	
Περὶ ζώων φρονήσεως καὶ ἡθους α'	
Περὶ κινήσεως α'β'	
Περὶ ὄψεως α'β'γδ'	
Πρὸς ὄρους α'β'	270
Περὶ τοῦ δεδόσθαι α'	
Περὶ μείζονος καὶ ἐλάττονος α'	
Περὶ τῶν μουσικῶν α'	
Περὶ τῆς θείας εὐδαιμονίας πρὸς τοὺς ἐξ Ἀκαδημίας α'	

habent ut D.L.; Photius, *Lex.*, s.v. *τιάρα* (t.2 p.213.22 Naber), *schol. in Plat. Remp.* 8 553C (t.1 p.260.8 Greene) et *Suda*, s.v. *τιάρα* (no. 547 pars 4 p.544.30-1 Adler) *Περὶ βασιλείας Κυπρίων*; cf. D.L. 5.42 v.97 et 5.47 v.219

265 cf. D.L. 5.46 v.201 et 5.50 v.288

266 *Simpl.*, In *Arist. De caelo* 4.3 310b1 (CIAG t.7 p.700.6-7) *Περὶ τῆς τῶν στοιχείων γενέσεως*; *Apuleius, Apol.* 36 *De genitu animalium*

268 cf. D.L. 5.44 v.137

273 cf. D.L. 5.47 v.225

263-6 om. *Fac*

266 *Περὶ γενέσεως α' aWV*: *Περὶ <ζώων> γενέσεως α'* Meurs, qui *Apuleium* confert: *Περὶ <τῆς τῶν στοιχείων> γενέσεως α'* Steinmetz, qui *Simpl.* confert

267-72 om. *c*

270 *Πρὸς ὄρους α'β' BPQW*: *Περὶ ὄρους α'β' Co*: om. *Fac*: *Περὶ ὄρου Fmg*

271 *δεδόσθαι aW*: *δίδοσθαι Meurs*

272 *Περὶ aW*: *Περὶ τοῦ h*

273 *ante hunc titulum Περὶ κινήσεως perperam inserit F τῶν BFPQCoWV*: om. *F*

274 *τῆς BFPQWV*: om. *Co*.

Ἀκαδημίας B: *Ἀκαδημίας FPQCoWV α' post εὐδαιμονίας add. Meurs*

	Προτρεπτικός α'	275
	Πῶς ἄριστ' ἂν πόλεις οἰκοῖντο ὑπομνήματα α'	
	Περὶ ῥύακος τοῦ ἐν Σικελίᾳ α'	
	Περὶ τῶν ὁμολογουμένων α'	
	Περὶ τῶν προβλημάτων φυσικῶν α'	
	Τίνες οἱ τρόποι τοῦ ἐπίστασθαι α'	280
	Περὶ τοῦ ψευδομένου α'β'γ'	
50	Τὰ πρὸ τῶν τόπων α'	
	Πρὸς Αἰσχύλον α'	
	Ἀστρολογικῆς ἱστορίας α'β'γ'δ'ε'ς'	
	Ἀριθμητικῶν ἱστοριῶν περὶ αὐξήσεως α'	285

275 cf. D.L. 5.50 v.297

276 cf. D.L. 5.45 v.158

279 cf. D.L. 5.45 v.159, 5.47 v.236 et 5.48 vv.238–9; de locis Arabicis vid. Gutas cat. no. 9

282 cf. D.L. 5.45 v.171

284 *Simpl.*, In Arist. De caelo 2.12 292b10 (CIAG t.7 p.488. 19–20) eandem inscr. habet ut D.L., sed opus Eudemo (fr.148 Wehrli) attribuitur; Clem. Alex., Strom. 1.14.65.1 (GCS t.52[15] p.41.9–10) et Theo Smyrnaeus, Expos. rerum mathematicarum p.198 Hiller Ἀστρολογίαι, quibus locis opus Eudemo (fr.143 et 145) attribuitur; D.L. 1.23, quo loco Eudemus ἐν τῇ περὶ τῶν Ἀστρολογουμένων ἱστορία citatur (fr.144)

285 *Porph.* In Ptolem. Harmon. p.115.4–5 Düring Ἀριθμητικὴ ἱστορία, quo loco opus Eudemo (fr.142) attribuitur

276 Πῶς ἄριστ' ἂν πόλεις οἰκοῖντο (οἰκεῖντο B) ὑπομνήματα α' BPQCoWDGT: Πῶς ἂν ἄριστα πόλεις οἰκοῖντο α' F: Πῶς ἂν ἄριστα πόλεις οἰκοῖτο ὑπομνήματα α' c: Πῶς ἂν ἄριστα πόλεις οἰκοῖντο ὑπομνήματα α' h: Πῶς ἄριστ' ἂν πόλεις οἰκεῖν α' τὰ ὑπομνήματα α' S: Πῶς ἄριστ' ἂν πόλεις οἰκοῖτο α' τὰ ὑπομνήματα α' Meurs: Πῶς ἄριστ' ἂν πόλεις οἰκοῖτο α' τὰ ὑπνήματα (sic) <ἱστορικὰ> α' Usener

279 τῶν BPQCoW: om. F

284 hic V restituitur cum (Ἀστρολο)γικῆς

285 Ἀριθμητικῶν ἱστοριῶν (ἱστορικῶν Q) περὶ αὐξήσεως α' BFPQVW: Ἀριθμητικῶν ἱστοριῶν Περὶ αὐξήσεως α' Co:

Ἀκίχαρος α'

Περὶ δικανικῶν λόγων α'

Περὶ διαβολῆς α'

Ἐπιστολαὶ αἱ ἐπὶ τῷ Ἀστυκρέοντι, Φανία, Νικάνορι

Περὶ εὐσεβείας α'

290

Εὐιάδος α'

Περὶ καιρῶν α'β'

Περὶ οἰκείων λόγων α'

Περὶ παίδων ἀγωγῆς α'

ἄλλο διάφορον α'

295

Περὶ παιδείας ἢ περὶ ἀρετῶν ἢ περὶ σωφροσύνης α'

Προτρεπτικὸς α'

288 cf. D.L. 5.46 v.201 et 5.49 v.265

289 D.L. 5.37 vv.20-1 et schol. in Apoll. Rhod. Argonaut. 1.972 (p.85.12-13 Wendel) ἐν τῇ πρὸς Φανίαν ἐπιστολῇ; cf. D.L. 5.46 v.204

290 schol. in Aristoph. Aves 1354 (p.244.13 White), quo loco Θεόπομπος in codd. occurrit; Ruhnken Θεόφραστος coni. recte ut videtur

292 Photius, Lex., s.v. Κυψελιδῶν ἀνάθημα ἐν Ὀλυμπίᾳ (t.1 p.363.11-12 Naber), Pap. Oxy. 7 1012 fr.9 col. 2.27 = Pack² 2289, Suda, s.v. Κυψελιδῶν ἀνάθημα ἐν Ὀλυμπίᾳ (no. 2804 pars 3 p.224.6-7 Adler); cf. D.L. 5.45 v.156

296 Pap. Petersburg. 13 (Mitteis et Wilcken, no. 155.10 t.1.2 p.183) = Pack² 2089 Περὶ σωφροσύνης; de locis Arabicis vid. Gutas cat. no. 11; cf. D.L. 5.42 v.96 et 5.46 v.192

297 cf. D.L. 5.49 v.275

Ἀριθμητικῶν ἱστοριῶν <α'> Περὶ αὐξήσεως α' Meurs

286 Ἀκίχαρος F^{mg} PQCoWV: om. F^{ac}: Ἀκείχαρος B

289 αἱ ἐπὶ BFPQWV: ἐπὶ Co: αἱ ἐπι<γραφομέναι> Usener Φανία PQCoWV: Φανεία B: Φιλανία F

291 Εὐιάδος PQCoWV: Εὐειάδος B: Εὐιδάος F: Θυιάδες Usener

293 α' FPQCoWV: α'β' B

294 ἀγωγῆς FPQCoWV: ἀπαγωγῆς B

295 om. F^{ac}

Περὶ ἀριθμῶν α'
 Ὅριστικά περὶ λέξεως συλλογισμῶν α'
 Περὶ οὐρανοῦ α'
 Πολιτικοῦ α'β'
 Περὶ φύσεως
 Περὶ καρπῶν
 Περὶ ζώων

300

ἃ γίνονται στίχων μκγ, βων· τοσαῦτα μὲν οὖν καὶ τῷδε 305
 τὰ βιβλία.

- 51 εὐρον δ' αὐτοῦ καὶ διαθήκας τοῦτον ἐχούσας τὸν τρόπον·
 “ἔσται μὲν εὔ. ἐὰν δέ τι συμβῇ, τάδε διατίθεμαι. τὰ μὲν
 οἴκοι ὑπάρχοντα πάντα δίδωμι Μελάντη καὶ Παγκρέοντι 310
 τοῖς υἱοῖς Λέοντος. ἀπὸ δὲ τῶν παρ' Ἰππάρχου συμβεβλη-
 μένων τάδε μοι βούλομαι γενέσθαι. πρῶτον μὲν βούλομαι
 γενέσθαι τὰ περὶ τὸ μουσεῖον καὶ τὰς θεὰς συντελεσθῆναι
 κἂν εἴ τι ἄλλο δύναται περὶ αὐτὰς ἐπικοσμηθῆναι πρὸς τὸ

300 *Alex. Aphr. ap. Simpl., In Arist. De caelo prooem.*
(CIAG t.7 p.1.8–10), Simpl., In Arist. Phys. 8.5 257b6–13
(CIAG t.10 p.1236.1) et Procl., In Plat. Tim. 35A (t.2
p.122.17 Diehl)

301 *cf. D.L. 5.45 v.155*

302 *cf. D.L. 5.46 v.179*

304 *cf. D.L. 5.44 v.127*

298 ἀριθμῶν *aWV*: ῥυθμῶν *Meurs*

299 Ὅριστικά περὶ λέξεως (λέξεων *Co*) συλλογισμῶν α'
BF^{mg}PQCoWV: *om. Fac*

301 Πολιτικοῦ *BPQWV*: *om Fac*: Πολιτικά *F^{mg}Co*: Πολι-
 τικῶν *cdA*: Πολιτικὸς *hn*

304 *sine numero FPQCoWV*: α' *B*

305 ἃ *FPQCoWV*: *om. B*

μκγ, βων *BPQCoWV*: μβων *F*

τῷδε *FPQCoWV*: τάδε *B*: τοῦδε *C*

308 ἔσται *FPQCoWV*: ἔστε *B*

309 Μελάντη *BF*: Μέλαντι *PQCoWV*

313 δύναται *BPQCoWV*: ἰσχύη *F*

ἐπικοσμηθῆναι *PWV*: ἐπικομισθῆναι *BFQCo*

- κάλλιον. ἔπειτα τὴν Ἀριστοτέλους εἰκόνα τεθῆναι εἰς τὸ
 ἱερὸν καὶ τὰ λοιπὰ ἀναθήματα, ὅσα πρότερον ὑπῆρχεν ἐν 315
 τῷ ἱερῷ. εἶτα τὸ στῳίδιον οἰκοδομηθῆναι τὸ πρὸς τῷ μου-
 σείῳ μὴ χεῖρον ἢ πρότερον. ἀναθεῖναι δὲ καὶ τοὺς πίνακας,
 52 ἐν οἷς αἱ τῆς γῆς περίοδοί εἰσιν, εἰς τὴν κάτω στοάν. ἐπι-
 σκευασθῆναι δὲ καὶ τὸν βωμόν, ὅπως ἔχη τὸ τέλειον καὶ τὸ
 εὖσχημον. βούλομαι δὲ καὶ τὴν Νικομάχου εἰκόνα συν- 320
 τελεσθῆναι ἴσην. τὸ μὲν τῆς πλάσεως ἔχει Πραξιτέλης· τὸ
 δ' ἄλλο ἀνάλωμα ἀπὸ τούτου γενέσθω. σταθῆναι δὲ ὅπου
 ἂν δοκῇ τοῖς καὶ τῶν ἄλλων ἐπιμελουμένοις τῶν ἐν τῇ
 διαθήκῃ γεγραμμένων. καὶ τὰ μὲν περὶ τὸ ἱερὸν καὶ τὰ
 ἀναθήματα τοῦτον ἔχει τὸν τρόπον. 325
- τὸ δὲ χωρίον τὸ ἐν Σταγείροις ἡμῖν ὑπάρχον δίδωμι
 Καλλίνῳ· τὰ δὲ βιβλία πάντα Νηλεῖ. τὸν δὲ κῆπον καὶ τὸν
 περίπατον καὶ τὰς οἰκίας τὰς πρὸς τῷ κήπῳ πάσας δίδωμι
 τῶν γεγραμμένων φίλων ἀεὶ τοῖς βουλομένοις συσχολάζειν
 53 καὶ συμφιλοσοφεῖν ἐν αὐταῖς, ἐπειδήπερ οὐ δυνατόν ἀεὶ 330
 πᾶσιν ἀνθρώποις ἐπιδημεῖν, μήτ' ἐξαλλοτριοῦσι μήτ' ἐξ-
 ιδιαζομένον μηδενός, ἀλλ' ὥς ἂν ἱερὸν κοινῇ κεκτημένοις καὶ
 τὰ πρὸς ἀλλήλους οἰκείως καὶ φιλικῶς χρωμένοις, ὥσπερ
 προσῆκον καὶ δίκαιον.
- ἔστωσαν δὲ οἱ κοινωνοῦντες Ἴππαρχος, Νηλεὺς, Στρά- 335
 των, Καλλίνος, Δημότιμος, Δημάρατος, Καλλισθένης,

327 Strabo 13.1.54 608-9, Plut., Sulla 26 et Athen. 1.3A-B

316-317 τῷ μουσεῖῳ BFPQWV: τὸ μουσεῖον Co^{ac}: τὸ μου-
 σείῳ Co^{pc}

317 χεῖρον ἢ BF: χεῖρον Co: χείρονι PQWV

321 πλάσεως aWV: πράξεως chT

322 γενέσθω BFPCoWV: γενέσθαι Q

325 ἔχει aWV: ἐχέτω Cobet

329 συσχολάζειν FPQCoWV: σχολάζειν B

330 αὐταῖς F: αὐτῷ BPQCoWV

330-1 ἀεὶ ante πᾶσιν ἀνθρώποις BPQCoWV: post πᾶσιν
 ἀνθρώποις F

332 ἀλλ' ὥς FPQCoWV: om. B et lac. ca. 35 litt.

336 Καλλίνος BPQCoW: Καλλίνικος FV

Μελάντης, Παγκρέων, Νίκιππος. ἐξεῖναι δὲ βουλομένω
φιλοσοφεῖν καὶ Ἀριστοτέλει τῷ Μητροδώρου καὶ Πυθιάδος
νύῳ καὶ μετέχειν τούτων. καὶ αὐτοῦ πᾶσαν ἐπιμέλειαν
ποιεῖσθαι τοὺς πρεσβυτάτους, ὅπως ὅτι μάλιστα προαχθῇ 340
κατὰ φιλοσοφίαν.

θάψαι δὲ καὶ ἡμᾶς ὅπου ἂν δοκῇ μάλιστα ἀρμόττον εἶναι
τοῦ κήπου, μηδὲν περιέργον περὶ τὴν ταφήν μήτε περὶ τὸ
54 μνημεῖον ποιούντας. ὅπως δὲ συνείρηται μετὰ τὰ περὶ ἡμᾶς
συμβάντα <τὰ> περὶ τὸ ἱερὸν καὶ τὸ μνημεῖον καὶ τὸν 345
κήπον καὶ τὸν περίπατον θεραπευόμενα, συνεπιμελεῖσθαι
καὶ Πομπύλῳ τούτων ἐποικοῦντα αὐτὸν καὶ τὴν τῶν ἄλ-
λων ἐπιμέλειαν ποιούμενον ἦν καὶ πρότερον· τῆς δὲ λυσι-
τελείας ἐπιμελεῖσθαι αὐτοῦ τοὺς ἔχοντας ταῦτα.

Πομπύλῳ δὲ καὶ Θρέπτῃ πάλαι ἐλευθέροις οὖσι καὶ ἡμῖν 350
πολλὴν χρεῖαν παρεσχημένοις, εἴ τι πρότερον ἔχουσι παρ'
ἡμῶν καὶ εἴ τι αὐτοὶ ἐκτήσαντο, καὶ ἃ νῦν παρ' Ἰππάρχου
αὐτοῖς συντέταχα, δισχιλίας δραχμάς, ἀσφαλῶς οἶμαι δεῖν

338–9 *Sext. Emp., Adv. Math.* 1.258

344–6 *Harpocr., s.v. ὀργεῶνας* (t.1 p.224.17–225.6 *Din-*
dorf), *ex quo pendet Suda, s. v. ὀργεῶνας* (no. 512 pars 3
p.553.5–13 *Adler*)

337 Μελάντης *BFCo*: Μέλαντις *PQWV*

338 Μητροδώρου *corr. Nunnesius et Schottus sec. Sext. Emp.*: Μειδίου *FPQCoWV*: Μηδίου *B*

342 ἀρμόττον *aWV*: ἀρμόδιον *d*

343 περιέργον *BPQCoWV*: περιέργον μήτε *F*
μήτε *FPQCoWV*: μηδὲ *B*

344 συνείρηται *aWV*: συνίηται (*sic*) *Salmasius ap. Ménage*

344–5 τὰ–συμβάντα *aWV*: τὸ–συμβάν, τὰ *Roeper*

345 τὰ *ante* περὶ *add. Cobet*

346 θεραπευόμενα *aWV*: ὑπὸ τῶν ὀργεῶνων *Salmasius ap. Ménage*

347 τούτων *B*: τοῦτον *FPQCoWV*

αὐτὸν *aWV*: αὐτοῦ *d*

349 αὐτοῦ *Ménage*: αὐτὸν *Fac PQCoWV*: αὐτοὺς *F^{sl}*: αὐ-
τῶν *B*

αὐτοῖς ὑπάρχειν ταῦτα, καθάπερ καὶ αὐτοῖς διελέχθην
Μελάντη καὶ Παγκρέοντι πλεονάκεις καὶ πάντα μοι συγκατ- 355
ετίθεντο. δίδωμι δ' αὐτοῖς καὶ Σωματάλην καὶ τὴν παι-
δίσκην.

55 τῶν δὲ παίδων Μόλωνα μὲν καὶ Κίμωνα καὶ Παρμένοντα
ἤδη ἐλευθέρους ἀφίημι. Μάνην δὲ καὶ Καλλίαν παραμεί- 360
ναντας ἔτη τέτταρα ἐν τῷ κήπῳ καὶ συνεργασαμένους καὶ
ἀναμαρτήτους γενομένους ἀφίημι ἐλευθέρους. τῶν δ' οἰκη-
ματικῶν σκευῶν ἀποδιδόντας Πομπύλῳ ὅσα ἂν δοκῇ τοῖς
ἐπιμεληταῖς καλῶς ἔχειν, τὰ λοιπὰ ἐξαργυρίσαι. δίδωμι δὲ
καὶ Καρίωνα Δημοτίμῳ, Δόνακα δὲ Νηλεῖ. Εὐβοοὺν δ' ἀπο- 365
δόσθαι.

δότῳ δ' Ἰππαρχος Καλλίνῳ τρισχιλίας δραχμάς. Με-
λάντη δὲ καὶ Παγκρέοντι εἰ μὲν μὴ ἐωρῶμεν Ἰππαρχον καὶ
ἡμῖν πρότερον χρεῖαν παρεσχημένον καὶ νῦν ἐν τοῖς ἰδίοις
μάλα νεναυαγηκότα, προσετάξαμεν ἂν μετὰ Μελάντου καὶ
56 Παγκρέοντος ἐξάγειν αὐτά. ἐπειδὴ δὲ οὔτε ἐκείνοις ἐώρων 370
ῥάδιον ὄντα συνοικοδομεῖν λυσιτελέστερόν τε αὐτοῖς ὑπ-
ελάμβανον εἶναι τεταγμένον τι λαβεῖν παρ' Ἰππάρχου,
δότῳ δ' Ἰππαρχος Μελάντη καὶ Παγκρέοντι ἐκατέρῳ τά-
λαντον. διδόναι δ' Ἰππαρχον καὶ τοῖς ἐπιμεληταῖς εἰς τὰ
ἀναλώματα τὰ ἐν τῇ διαθήκῃ γεγραμμένα κατὰ τοὺς ἐκάσ- 375
του καιροὺς τῶν δαπανημάτων. οἰκονομήσαντα δὲ ταῦτα
Ἰππαρχον ἀπηλλάχθαι τῶν συμβολαίων τῶν πρὸς ἐμέ
πάντων· καὶ εἴ τι ἐπὶ τοῦ ἐμοῦ ὀνόματος συμβέβληκεν

354 αὐτοῖς *aWV*: αὐτὸς *Reiske* διελέχθην *BW*: δι-
ελέχθη *CoV*: διειλεχθην *P*: διειλέχθημεν *F*: διηλέγχθην *Q*

356 καὶ (*alt.*) *om. Frob.*

358 Μόλωνα *BPQCoWV*: Μώλωνα *F*

Κίμωνα *BPQCoWV*: Τίμωνα *F*: Σίμωνα *Cobet*

364 Εὐβοοὺν *FPQWV*: Ἐβοοὺν *B*: Εὔοον *Co*: Εὔβιον *Frob.*:
Εὔβοιον *Meineke*

366 Καλλίνῳ *BPQWV*: Καλλινίκῳ *FCo*

368 ἡμῖν *BPQCoWV*: μὴν *F*

371 συνοικοδομεῖν *a*: συνοικοδομεῖν *WV*

374 δ' *BPQCoWV*: καὶ δ' *F*

376 οἰκονομήσαντα *aWV*: οἰκοδομήσαντα *d*

378 ἐπὶ *BPQCoWV*: περὶ *F*

Ἰππαρχος ἐν Χαλκίδι, Ἰππάρχου τοῦτό ἐστιν.

ἐπιμεληταὶ δ' ἔστωσαν τῶν ἐν τῇ διαθήκῃ γεγραμμένων 380

Ἰππαρχος, Νηλεὺς, Στράτων, Καλλίνος, Δημότιμος, Καλλισθένης, Κτήσαρχος.

- 57 αἱ διαθήκαι κεῖνται ἀντίγραφα τῷ Θεοφράστου δακτυλίῳ
σεσημασμένοι, μία μὲν παρ' Ἠγησίᾳ Ἰππάρχου· μάρτυρες
Κάλλιππος Παλληνεὺς, Φιλόμηλος Εὐωνυμεὺς, Λύσανδρος 385
Ὑβαίης, Φιλίων Ἀλωπεκῆθεν. τὴν δ' ἑτέραν ἔχει Ὀλυμ-
πιόδωρος· μάρτυρες δ' οἱ αὐτοί. τὴν δ' ἑτέραν ἔλαβεν
Ἀδείμαντος, ἀπήνεγκε δ' Ἀνδροσθένης ὁ υἱός· μάρτυρες
Ἀείμνηστος Κλεοβούλου, Λυσίστρατος Φίδωνος Θάσιος,
Στράτων Ἀρκεσιλάου Λαμψακηνός, Θήσιππος Θησίππου 390
ἐκ Κεραμέων, Διοσκουρίδης Διονυσίου Ἐπικηφίσιος.”

ᾧδ' ἔχουσιν αὐτῷ καὶ αἱ διαθήκαι.

ἀκοῦσαι δ' αὐτοῦ καὶ Ἐρασίστρατον τὸν ἱατρὸν εἰσὶ δ' οἱ
λέγουσι· καὶ εἰκός.

συμβέβληκεν BPQCoW: συμβέβηκεν FV

379 Ἰππάρχου τοῦτό ἐστιν aWV: Ἰππάρχω τοῦτο ἔσται
DGS: Ἰππάρχω τοῦτο ἐστὶν T: Ἰππαρχῷ τοῦτο ἔστω
Hermann

381 Καλλίνος BFPCoWV: Καλλίωνος Q

383 ἀντίγραφα aWV: ἀντίγραφαι C: ἀντίγραφοι <τρεῖς>
Reiske: <κατ'> ἀντίγραφα Richards

385 Παλληνεὺς Ménage: Πελλανεὺς BPQCoWV: Πελα-
νεὺς F

Φιλόμηλος (Φιλόμιλος B) Εὐωνυμεὺς BPQCoWV: om. F

386 Ὑβαίης BPQCoWV: Ὑβαίου F: Ὑβάδης Ménage

Φιλίων BFPCoW: Φιλίης Q: Φίλων I: Λίων V: Λέων d

ἔχει BFPQWV: ἔσχευεν Co

387 δ' ἑτέραν aWV: δὲ τρίτην Reiske

388 Ἀδείμαντος BFV: Ἀδήμαντος PQCoW

389 Ἀείμνηστος aWV: Ἀρίμνηστος Ménage

Κλεοβούλου B^{pc}FPQCoWV: Κλεόβουλος B^{ac}

Φίδωνος BPQW: Φεῖδωνος FCoV

Θάσιος BPQCoWV: Θάσειος F

393–4 εἰσὶ δ' οἱ λέγουσι PQCoWV: εἰσὶν οἱ λέγουσι F: εἰσὶ
δ' οἱ λέγοντες B

IV. TEXTUAL PROBLEMS

The following is not an exhaustive commentary but a series of brief remarks on selected textual problems.

3-4 The reading *proteron men . . . eit'* is attractive since it is found in B, P, Q, Co, W, and V and is vaguely paralleled at 9.61. However, *prōton men . . . eit'*, the reading of F alone, is to be preferred, because it finds parallels at 1.33 and 3.19 and in the works of many other ancient authors, e.g., Xenophon, *Anab.* 1.2.16 and *Mem.* 1.2.1, Plato, *Polit.* 299B, *Crat.* 426D and *Laws* 640E and Aristotle, *PA* 1 640a22 and 3 665b28.

4 *Leukippou*, the reading of Q, is rejected by most editors and scholars. Ménage 615 gave the grounds for eliminating it: not only do the other major manuscripts offer different readings, but also if the famous originator of the atomic theory is meant, there is a serious discrepancy with what Diogenes says in the life of Leucippus (9.30). For he records his homeland alternately as Elea, Abdera, or Miletus. No period of his life has been associated with Lesbos by any ancient author. Perhaps a scribe, not recognizing the name Alcippus, inserted the better-known name Leucippus. F's *Akippou* is to be rejected, since it is not attested as a name elsewhere; it is probably a simple error in the writing of *Alkippou*. *Lakippou*, the reading of P^{ac} and V, is an inversion of the two initial letters of *Alkippou*.²²

Nothing is known about Alcippus besides what Diogenes tells us here. The name is, however, attested for fourth century B.C. Attica; four occurrences of it are listed by Kirchner.²³

14 All manuscripts examined for this edition read *energetikos*, and this is to be retained, for there is nothing objectionable about it either by itself or in conjunction with the other descriptive adjectives which Diogenes bestows on Theophrastus. In fact, being called *energetikos*, "ever ready to do a kindness," is quite complimentary. This may be seen from the bestowals of the honorary title of *energetēs* by the citizens of various Greek states on foreigners for services rendered in their behalf (cf. Hdt. 3.140, 8.85 and 136, Xenophon, *Hell.* 1.1.26, Lysias 13.72 and 20.19 and Demosthenes 19.330 and 20.60).²⁴ Theophrastus himself regarded *energesia* as one of three things which hold together human life (Stobaeus, *Anth.* 4.1.72 vol.4 p.23.17-19 Hense = L79 Fortenbaugh).

The conjecture of Richards 345, *energētikos*, is attractive because it accords well with the three other laudatory adjectives attributed to Theophrastus in this portion of the text (*sunetōtatos*, *philoponōtatos*, and *philologos*). But *energētikos* is rarely said of persons, being reserved commonly for actions

(e.g., Aristotle, *Phys.* 3.3 202a17, *Metaph.* 11.9 1066a31 and *EE* 2.2 1220b3 and Sextus Empiricus, *Adv. Math.* 7.223). It may be that Richards intends *energetikos* to approximate *philoponōtatos* in meaning, but the basic sense of “productive (of something)” is retained by the word; it lacks the additional connotations often associated with the English word “energetic.”

Hecker 434 conjectured that one ought to read *heuretikos* instead of *energetikos*. This appears to be another attempt to maintain some semblance of similarity among the traits ascribed to Theophrastus. Such an emendation is misinformed, for the word is used of one who makes discoveries or is inventive, ingenious or famous for some creation or innovation. Diogenes regularly reports the discoveries or inventions of philosophers (e.g., 1.22–4, 68, 2.1, 6, 11, 20, 48, 65, 112, 123, 3.18, 4.2, 3, 28, 5.9),²⁵ but in the case of Theophrastus there is no justification for Diogenes to call him *heuretikos*, for he does not credit him with any noteworthy inventions or discoveries.

19 The reading of B and V^{ac}, *deiktēriou*, and, although italicized to *diktēriou*, F^{ac}P^{ac} and Q, is correct. The variant *dikastēriou* in F^{pc}P^{sl}Co W and V^{mg} does not make very good sense with what follows in the extract from Theophrastus’ letter to Phanias. It is possible that the word arose from the previous passage concerning Agnonides’ prosecution of Theophrastus for impiety, which took place in a court of law (*dikastērion*).

The word *deiktērion* may be used for both a lectern or pulpit and a lecture-room or -hall. Basil of Seleucia, archbishop of Isauria, albeit a late writer (ca. A.D. 458), provides us with this definition: “This (sc. *deiktērion*) is the name for the place where speakers make a presentation (*epideiknuntai*), that is, the pulpit (*ho ambōn*) or the lecture-hall (*to akroatērion*).”²⁶ In the *Etymologicum Magnum*, s.v. *deiktērion* (p.261.9–12 Gaisford), it is explained further that this was originally the name given to the place on Samos where Athena showed a representation of the Gorgon’s head to Perseus; the etymology is given as *para tēn deixin oun deiktērion*. Diogenes uses the word to refer to the lecture-hall or classroom where Theophrastus delivered lectures to his pupils. The conjectures of Wyse, *didaskalion*, and Apelt, *didaktēriou*, are unnecessary, for both are practically synonymous with *deiktērion*.

25 Some scholars believe that something has fallen out of the text between *scholastikon* and *ōnomaken*. Ménage 616 proposed the insertion of *hauton* but provided no justification for it.²⁷ Other alternatives have been suggested: Hicks translates “he has called someone ‘pedant,’” understanding *tina* without inserting it into the Greek text. Gigante 213 n.43 inserts *onoma* and translates “adottò il termine ‘scolastico.’” See also M. Capasso, “Note laertziane,” *Elenchos* 1 (1980) 161–3. Boyancé 313 thinks the quotation from the letter ends in line 23 with *epanorthōseis*. He makes *to d’ anaballesthai*—

ōnomaken into one continuous sentence by inserting *ho* before *ouketi*, thereby creating a relative clause. He renders the sentence: "Dans cette lettre, il a appelé *scholastikon* le fait de se décharger de tout et de ne pas se soucier de ce que l'âge ne supporte plus."

The problem is that *onomazein* commonly governs two accusatives, as in English "to name (or call) someone something." But this is not necessary; the verb can mean "to use the term," in which case it governs only one accusative. Cf. D.L. 3.24 and Plato, *Theaet.* 166C and 201D. Gigante's translation shows that he takes *ōnomaken* to mean "he used the term," but his insertion of *onoma* is pleonastic. The unanimous reading of the manuscripts, *scholastikon ōnomaken*, is correct and needs no insertion of any kind.

64 The imperfect *ērchrometha* is offered by all of the manuscripts investigated and may preserve a personal or subjective utterance by Theophrastus; he may have said, "Just when we were beginning to live [i.e., the imperfect], then we die." But Stephanus changed *ērchrometha* to the present tense, *archometha*, and this emendation has been accepted by all later editors and scholars. It presents us with a more general statement on the brevity of human life: "Just when we begin to live, then we die," and this seems to fit best with what Theophrastus says in the rest of his dying utterance.

76-7 Ménage 619 reports the reading *biblia kai auta* from a codex Palatinus. This can only be one of three manuscripts: E, S, or Psi. Yet none of these offers the reading Ménage reports. He adds *pro ha kai autos quod sequitur* (i.e., in the codex Palatinus), *ha kai auta habent Membranae Regiae*.²⁸ Yet in only two manuscripts examined for this edition, C and X, does *ha kai autos* occur. It may be either an error in copying or, what seems more likely, a correction made by a copyist. The major manuscripts, however, are unanimous in offering *autos . . . auta*, and this has been preferred; the variant *auta . . . autos* has been rejected and omitted from the critical apparatus.

83 All manuscripts examined and the *Suda*, s.v. *Theophrastos*, read *topōn*. Brandis notes that Alexander of Aphrodisias cites a work of Theophrastus entitled *Anēgmenōn logōn eis ta schēmata* and suggests emending Diogenes' *topōn* to *logōn*.²⁹ Solmsen, on the other hand, accepts Diogenes' *topōn* as correct and believes that Alexander's *logōn* is the correction of a copyist.³⁰ In fact, rather than emend Diogenes from Alexander, he suggests emending Alexander from Diogenes. It is entirely possible that neither passage should be emended; the same work may have been known by two titles.³¹

84-5 The reading of B, *Agōnistikon*, appears to be an error resulting from the similarity in the pronunciation of omicron and omega in later Greek. The creation of a double title is desirable, for *agōnistikoi* (*logoi*) are the same

as *eristikoi logoi*, as recognized and explained by Schmidt 23–4, who inserts *ē* before *tēs* but retains B's *Agōnistikon*, believing that it modifies an implicit *biblion*. Usener 3–4 likewise sees the need for a double title and inserts *ē*, but he emends *tēs* to *tōn*. He seems to have been led to this latter change by the Latin translations of Ambrosius, *Speculationes eorum quae circa contentiosam orationem versantur*, and Thomas Aldobrandinus, *Concertatio eorum quae spectant ad litigiosas sermones*. There seems to be no need, however, to alter *tēs* to *tōn*. If the title is a double one, then *Agōnistikōn* stands alone as the first alternative title, and *tēs*—*theōrias* as the other. Bocheński 31 makes the attractive suggestion that the title originally began *Agōnistikōn ē peri:* i.e., the conjunction *ē* was originally in the title, but was altered in copying to *tēs*. Thus he, too, sees the title as a double one and, moreover, seeks to avoid a title beginning with *tēs*. We should, however, have no difficulty with a title beginning with *tēs*, for there are other titles in Theophrastus' catalog of writings that begin with a definite article in the genitive case: e.g., 5.43 line 102, 5.43 line 107, 5.47 line 230, and 5.48 line 256.

Perhaps the best solution to the problem created by the absence of a book number for this work is to assume that there was only one volume and that the numeral has simply been lost in the course of transmission. Because this is only a speculative assumption, *α'* has not been introduced into the text.

92 Except B, all of the manuscripts examined read *lithoumenōn*. This cannot be right, for it falls in the section of the list under alpha and so violates alphabetical order.³² If it is not just a simple dislocation caused by scribal error, it might be that something has dropped out of the title which originally determined its placement here. Usener 4 suggests the emendation *apolelithōmenōn*. For this word, which means "things which have been petrified," he cites *De lap.* 38, where Theophrastus says, "And in some ways not so very different in nature from coral is also the Indian reed when it has been petrified (*apolelithōmenos*). These things, however, require separate investigation." Usener's suggestion is commendable, because Theophrastus did discuss petrification and may have written a separate treatise on the topic. Regenbogen 1418 advocates a similar emendation: *apolithoumenōn*.³³ He cites the occurrence of the word at *De lap.* 4 and *HP* 4.7.1 in support of this. Like Usener's, this conjecture is based on Theophrastus' own remarks concerning petrification, but in neither passage is a promise made to discuss the topic in a separate treatise.³⁴ Nevertheless, this emendation involves less alteration to Diogenes' text than does Usener's.

To attempt an emendation of *lithoumenōn*, however, may be misguided, for B, the oldest and most reliable manuscript of Diogenes' work, preserves

the reading *aithoumenōn*, “things which burn,” which does not violate alphabetical order.³⁵ The fact that *aithoumenōn* is a misspelling—the proper form is *aithomenōn*—should cause no dismay; orthographic errors are common in manuscripts of all periods and are easy to rectify and justify. In this case, the word was probably unknown to the scribe and hence he misspelled it. Rose (2) 280 prefers B’s reading, changing it to the correct form. He cites passages where “burning things” are referred to by Theophrastus: e.g., *De lap.* 22 and *De igne* 76. While the verb *aithomai* occurs in neither passage, in each case a promise is made to discuss such matters elsewhere.³⁶ Rose also cites the *De mir. ausc.* 33–40 832b26–833a23, which he considers the work of Theophrastus and in which things that burn are discussed.³⁷ But again, *aithomai* does not occur in the *De mir. ausc.* However, Rose observes further that Pliny, *NH* 2.107–11, treats burning things and suggests that Theophrastus was his source. It is indeed noteworthy that places mentioned by Pliny as burning are also named in the sections of the *De mir. ausc.* regarded as Theophrastean.³⁸

Jaeger argues against *aithomenōn* by saying that neither Aristotle nor Theophrastus used the verb *aithomai*.³⁹ But since so little of Theophrastus’ and Aristotle’s literary output has survived, his statement is misleading. One can only say that in the extant writings of Theophrastus and Aristotle the verb *aithomai* does not occur. The word is old, however, being used four times by Homer (*Il.* 6.182, 8.563, and 13.320 and *Od.* 7.101; always in participial form), by Pindar (*Olymp.* 1.1 and *Paeanes* 6.97), Euripides (*Hippol.* 1279, *Iphig. in Aul.* 1470 and *Bacch.* 624) and Apollonius of Rhodes (*Argon.* 3.296) among poets. It is used among writers of prose once by Herodotus (4.61), twice by Xenophon (*Anabasis* 6.3.19 and *Cyrop.* 5.1.16), and the cognate adjective is used metaphorically by Plato (*aithōnes thēres* at *Rep.* 8 559D). Thus it is not at all impossible that the word was in Theophrastus’ vocabulary and, given the testimony of B, it may well have occurred in the title of this work.

101-6 Four of these six titles appear out of alphabetical order, for they lack an initial delta in the significant word in their titles which would justify their placement in the list. This disruption is only apparent and is convincingly explained by Rose (1) 7.⁴⁰ Just as the first of the six titles is a critique of Democritus’ astronomical doctrine, so, too, are the following five titles critiques of other physical doctrines of Democritus. However, in each of the latter five titles *Dēmokritou* has fallen out, due perhaps to scribal error or, what is more likely, due to deliberate attempts to abbreviate. That Democritus did indeed have such physical doctrines and wrote on each topic is shown by the list of his writings copied by Diogenes from Thrasyllus’ catalog (9.45–9). Democritean doctrines seem to have continued to be

matters of philosophical controversy during the fourth and third centuries B.C., for we find treatises against Democritus' views in the lists of several other philosophers.⁴¹ Since Democritus marked a significant milestone in the history of philosophy, a topic increasingly developed and systematized in the Peripatos and especially by Theophrastus, all six Theophrastean works may have been included in the sixteen-volume collection *Physical Opinions* (5.48 line 251).

112 The reading of P and Q, *Peri eidōlōn*, is an error apparently influenced by the recent occurrence of that title in line 103. Meurs 632 wanted to alter *Peri eidōn* to *Peri ēthōn*. He observed that such a Theophrastean title is cited by three different ancient authors,⁴² but does not appear in Diogenes' catalog. Meurs also noted that *Peri eidōn* is not attested as a Theophrastean title except by Diogenes. In later Greek *ei* and *ē* did indeed come to be pronounced alike and delta was increasingly voiced and further dentalized, i.e., *ēthōn* sounded much like *eidōn*, so that *ēthōn* may have been copied as *eidōn*. Nevertheless, *ethōn* would be out of alphabetical order and this greatly reduces the probability of Meurs's guess. The consensus of all manuscripts examined, except P and Q (as mentioned above), is *eidōn*, and this has been retained.

120-7 In this section of the catalog titles are being listed under zeta, but five of the eight titles in lines 120-7 appear out of alphabetical order. The reason for the listing of these titles in apparent violation of the alphabetical order can be explained in the following way. Each of the first seven is a treatise in one book. That all were zoological treatises is confirmed by fragments preserved from each by various ancient authors (see the upper apparatus). In each of the five titles out of order one might be inclined to restore *zōiōn* and thus preserve the alphabetical scheme, but this is not necessary for the following reason. The last of the eight titles (line 127) is a seven-volume collective work comprising all seven preceding single-volume works and as such justifies their position in the list.⁴³

134 The reading of all manuscripts examined is *Peri kataphaseōs a' kai apophaseōs*. In none of the manuscripts is a division indicated after the book number. All previous editors have regarded the numeral as out of place and have accordingly moved it, placing it in what they consider its correct position after *apophaseōs*. This emended form of the title receives some support from Galen's citation of it and Boethius' Latin translation *De affirmatione et negatione* (see the upper apparatus for references). But it may be incorrect to emend Diogenes' text on the basis of these two citations. For in list II of the catalog *Peri apophaseōs a'* occurs (5.46 line 194). Usener 14–15 tentatively suggests changing this to *Peri apophanseōs*, which avoids repeating

a portion of the earlier title as emended. Moreover, *apophansis* is a generic term which includes both *kataphasis* and *apophasis* (see, e.g., Aristotle, *De int.* 4 16b27–9). If Usener's change is correct, it creates a variant title for the earlier one as emended.

Two different possibilities have been suggested by Professor Fortenbaugh: (1) *kai apophaseōs* was omitted by a copyist due to homoeoteleuton (*-phaseōs* being the ending of both words in question); a corrector, noticing the omission, added *kai apophaseōs*, but failed to make clear the proper position of the book number. On this explanation the correct title of the work is *Peri kataphaseōs kai apophaseōs a'*. (2) A reader, coming upon *Peri apophaseōs a'* in list II, recalled the earlier occurrence of *Peri kataphaseōs a'* in list I, returned to that title and wrote *kai apophaseōs* in the margin. Later, this marginal note was incorporated into the text without the transposition of the numeral. Such a theory is, of course, speculative, but it does suggest a comparatively simple emendation, namely, bracketing *kai apophaseōs*. In support of this one might mention Alexander of Aphrodisias, who seven times cites Theophrastus' work as *Peri kataphaseōs*, i.e., without *kai apophaseōs* (see the upper apparatus).

154 This title is also out of alphabetical order since it falls among titles listed under pi. Realizing its improper placement, Usener 6 conjectures that *Politeumata* has fallen out before *nomothetōn*. He refers to Aristotle, *Pol.* 2.12 1273b27–1274b28, as support for such a restoration. While the insertion of *Politeumata* would save the alphabetical order, it is doubtful that the word was actually in the original title. The passage in the *Politics* does concern the governments and institutions established by different lawgivers, but Aristotle does not use the word *politeuma*. Rather than assume that some scribe omitted a word beginning with pi,⁴⁴ perhaps it is better to suppose that the title is (mis)placed before three political titles because it shares a common theme with them; content has overridden alphabetical arrangement. For another possible instance of listing according to content see the remarks on *Peri paranomōn a'*, 5.47 line 229.

184-5 In each of the manuscripts examined *phusikōn* rather than *phutikōn* is offered in both of these titles. Casaubon 89 believed that Theophrastus' two major botanical works, *History of Plants* and *Causes of Plants*, are meant here and accordingly altered *phusikōn* in both.⁴⁵ It is likely that some scribe was influenced by the occurrence of *phus-* in the five preceding titles and mistakenly repeated it. On the other hand, it is possible that Casaubon's emendation is wrong; *HP* and *CP* may not be represented in Diogenes' catalog at all. Other Theophrastean works are noticeably absent from the lists, e.g., the extant *Metaphysics* and the *De interpretatione*, *Categories*, *Ethics*.⁴⁶ The fact that Diogenes lists ten books for the first work and eight

for the second, whereas the extant *HP* has only nine books and the *CP* six is not, however, an argument against Casaubon's emendation. Rather it seems to support the claim that the two titles are the *HP* and the *CP*. For the present Book Two of *HP* was originally two separate books, so that the listing of ten books by Diogenes is easily explainable. In addition, we know that the present *CP* is incomplete and can point to two other titles that may well be the missing books: e.g., *Peri odmōn*, 5.45 line 151, and *Peri oinou kai elaion*, 5.45 line 152. For further details see the remarks of Regenbogen 1452. Thus there is good reason to believe that the manuscripts are in error and that Casaubon's emendation is correct.

200 The alphabetical order of list II is disrupted by this title, since it occurs in the section under delta. Its placement may be explained simply as the careless error of a copyist, but Professor Fortenbaugh's comment to S32 proposes two more attractive possibilities: (1) the title may be listed alphabetically according to the stem of the word, i.e., *-dik-*, or (2) something may have fallen out of the original title which determined its placement. While explanation (1) is simpler and may possibly find a parallel in the similar (mis)placement of another title in list II, namely *Peri paranomōn a'*, explanation (2) is more likely. Professor Fortenbaugh compares Aristotle, *Rhet.* 1.13 1373b1, where just and unjust actions are classified and suggests emending the Theophrastean title to *Peri dikaiōmatōn* (or *dikaiopragēmātōn*)⁴⁷ *kai adikēmatōn a'*. Although there is no manuscript authority for such a change nor any indirect testimony for such a title, the suggestion is nevertheless attractive. It is easy to see how a scribe may have erred in copying by leaping with his eye from one word to another very similar word, omitting all which intervened. Such an emendation is also appealing for it would preserve the alphabetical order of the list.

217 The manuscripts unanimously offer *Peri thalattēs a'* at this point in the list, but it is out of alphabetical order, for titles are being listed under kappa. Usener 14 suggests inserting *kinēseōs* before *thalattēs*. This will indeed preserve the order, but the choice of *kinēseōs* seems arbitrary and to insert it into the text would endow it with unjustified respectability. One might insert almost any appropriate word beginning with kappa—*kuanseōs*, *krisēos*, *Krētikēs*, etc.—and achieve the same effect.⁴⁸

221 and 226 *Peri meteōrōn a'* is out of alphabetical order, since it falls between titles listed under kappa and lambda. Cobet, Hicks, and Long report *Peri metrōn a'* in line 221 and bracket it, for the same title appears in line 226. This seems to be an error based on a misunderstanding of manuscript F, which does indeed follow *Peri kōmōidias a'* in line 220 with *Peri metrōn a'*. But next F has *Megaklēs a'* (line 225) and omits all intervening

titles. A later hand, however, has signalled this omission by a symbol placed between *Peri metrôn a'* and *Megaklês a'*, which directs the reader to the lower margin of the page, where the five titles omitted by the first copyist are found: *Peri lexeôs a'*, *Logôn sunagôgê a'*, *Lyseis a'*, *Peri mousikês a'*, and *Peri meteôrôn a'*. This correction transposes *Peri meteôrôn* and *Peri metrôn* so that *Peri metrôn* is out of order. But both titles do appear in F. In all other manuscripts examined *Peri meteôrôn* appears in line 221 and *Peri metrôn* in line 226. Neither title should therefore be bracketed for deletion. I can, however, offer no explanation for the disturbance of the order caused by the (mis)placement of *Peri meteôrôn*.

229 The alphabetical order of list II is interrupted again by *Peri paranomôn a'*, since it occurs between nu and xi. The fact that it follows *Peri nomôn a'* suggests that it is listed according to subject matter. For *Peri nomôn* and *Peri paranomôn* obviously had much common ground and both may also have been extracts from Theophrastus' twenty-four-volume work *Laws*, 5.44 line 148. Content appears to have overridden alphabetical order.⁴⁹

247 The form of this title is unusual. One might be inclined to take *eidê* as nominative plural and translate *On the Rhetorical Arts, 17 Species*. But there is no other comparable example of such a title elsewhere in the catalog of writings; the number appearing at the end of a title is regularly understood as indicating the number of books in a work. Another alternative is to take *eidê* as an accusative plural dependent on *peri*. There are instances of this construction in other titles, e.g., 5.42 line 84–5 and 5.48 line 256; one can also point to similar constructions in Aristotle's writings, e.g., *Pol.* 4.4 1290b40 and 1291a1, 4.15 1300a8–10, *Rhet.* 3.12 1414a29 and *Poet.* 19 1456b8–9, but they are not precisely parallel cases. A third alternative has been suggested to me by Professor Fortenbaugh. It is that something has fallen out of the text: namely, *kat'* before *eidê*. He cites in comparison the title of Aristotle's collection of 158 constitutions (5.27) which is recorded in the manuscripts as *Politeiai poleôn duoin deousain rx' · kai idia · dēmokratikai, oligarchikai, tyrannikai, aristokratikai*. For *kai idia*, which makes no sense, Moraux 131–2 n.52 conjectures *kat' eidê*, for four species of constitution are specified in what follows in the listing of the title. Accordingly, if we were to insert *kat'* into the Theophrastean title and read *Peri technôn rhetorikôn, kat' eidê*, it would be more comprehensible. This is also attractive when one observes that the pseudo-Aristotelian *Problems*, which are arranged according to subject matter, is entitled *Aristotelous physika problēmata kat' eidos sunagôgê*. However, there is no manuscript authority for such a restoration of the Theophrastean title: it is speculation based on an analogous case of plausible emendation in Aristotle's list of writings.

Another problem with this title is the number of books attributed to the work (or the number of species, depending upon one's interpretation). The number varies in the manuscripts: B, F^{ac} and P^{ac} have 61, which is an odd number and very high. The correction to 60 in F is no better. In P^{pc}, Q, Co, and W, the number *za'* appears, but this is not a number; it is probably an error for *xa'* (61). The number 17, recorded in two late groups of manuscripts—c and d—has been adopted by most editors and scholars. But we should be cautious about adopting what is clearly an emendation in these manuscripts. Schmidt 60–1, who accepts 17 and believes the *eidē* are 17 species of the rhetorical arts, calls attention first to the classification of political speeches into three genera, each of which is composed of seven species in *Rhet. ad Alex* 1 1421b7–14, and secondly to Hermogenes, *De ideis* 1.2–2.9 (p.226.13–380.9 Rabe), where 17 *eidē* or *ideai* of speech (*logos*) are enumerated. Hermogenes' number of species is quite striking, for it is precisely the number recorded by c and d for Theophrastus' work. One suspects that the Theophrastean book number has been emended from Hermogenes and is therefore no more than a conjecture based on a comparatively late rhetorician.

Usener 20, who is followed by Regenbogen 1523, understands 17 as referring to the number of books in the work. He believes that the work was a collective one and that the individual books which comprised it appear separately in list II. He selects fourteen titles and then attributes four books to Theophrastus' *Peri lexeōs* rather than one book as recorded in the manuscripts. This gives him a full complement of 17 books, but the procrustean force which Usener applies in seeking to confirm his hypothesis is much too contrived. Not only is the assignment of some of the titles questionable—e.g., *Peri paradeigmatos a'*, 5.48 line 240, *Peri thorubou a'*, 5.47 line 214, and *Peri protheseōs kai diēgēmatos a'*, 5.48 line 241—but there are other rhetorical works in list II which he does not include—e.g., *Egkōmia theōn a'*, 5.47 line 207, *Logōn sunagōgē a'*, 5.47 line 223, *Peri metrōn a'*, 5.47 line 226, and *Peri horkou a'*, 5.47 line 232.

274 The only variation in this title among the manuscripts investigated is the omission of *tēs* in Co. In no manuscript is the title divided into two separate titles, *Peri tēs theias eudaimonias a'* and *Pros tous ex Akadēmeias a'*, as recorded by Cobet, Hicks, and Long. In the manuscripts titles are regularly marked off from one another by Greek semicolons; none occurs in this title. That there is no *a'* after *eudaimonias* in any of the manuscripts is not in itself conclusive proof that the title is continuous from *Peri* through *Akadēmeias*, for there are instances of titles without book numbers in the catalog.⁵⁰ But combined with the absence of a semicolon, the lack of a book number seems significant.⁵¹

276 This work is probably identical with *Peri aristēs politeias a'*, 5.45 line 158, as Usener 16, Zeller 865 n.5 and Regenboger 1514 surmise. As will be seen from the critical apparatus, there was a considerable amount of consternation among the scribes; the different variant readings betray attempts to emend the title. Five secondary manuscripts (E, H, I, S, and Y) divide the title in two after *oikointo*. Usener 11 likewise splits the title into two and lists the second as *ta historika hypnēmata (sic) a'*.⁵² As testimony to this title he cites a scholion on Apollonius of Rhodes' *Argonautica* 4.834 (p.296.2 Wendel = fr. 165 Wimmer), where Theophrastus is cited *en tois historikois hypomnēmasi*. This, however, is probably a reference to another work of Theophrastus, e.g., *Hypomnēmatōn Aristotelikōn ē Theophrastiōn*, 5.48 lines 249–50.⁵³ Since four primary manuscripts (B, P, Q, and Co)⁵⁴ and six secondary manuscripts (W, D, G, T, C, and X) offer *Pōs—hypomnēmata* as one title without break, this has been preferred.

298 The reading *arithmōn* is offered by all manuscripts examined. Because this title appears to fall within the alphabetical sequence of list IV,⁵⁵ between the letters pi and sigma, Usener 12 judged *arithmōn* incorrect and changed it to *rhythmōn*.⁵⁶ There is no need, however, for this. Rather, list IV ends in line 297 with *Protreptikos a'* and another short list, V, begins with *Peri arithmōn a'*. List V contains seven titles; it may be viewed as alphabetically arranged with two final additions or as two different lists: (1) Va, which includes lines 298–302 and is alphabetical, and (2) Vb, which consists solely of two additional titles. Alternately, Va may end in 301 and Vb may consist of three titles. For while *Peri phuseōs* does fit into the alphabetical sequence of Va, it also lacks a book number like the final two titles, and for this reason may belong to Vb.

304 No book number is listed for this final title in the catalog in any of the manuscripts examined except B, which records *a'*. This is surely a scribal error, for the following relative pronoun, *ha*, is omitted in B and included instead as the book number for *On Animals*.

338 All manuscripts investigated except B read *Meidiou*; B has *Mēdiou*, which is attributable to the similar pronunciation of *ei* and *ē* in later Greek. But Aristotle's daughter Pythias is recorded by Sextus Empiricus, *Adv. Math.* 1.258, as having been married to Metrodorus the physician and by him to have given birth to a son named Aristotle after his maternal grandfather.⁵⁷ Ménage 640 says that Nunnesius in his *Life of Aristotle* and Schottus in his *Comparative Lives* corrected Diogenes' text, replacing *Meidiou* with *Mētrōdōrou* in accordance with the information from Sextus. Among modern scholars only A. Gercke⁵⁸ and W. Kroll⁵⁹ object to the change and wish to retain the name *Meidias*. Gercke refers to D.L. 5.72, where we read of a physician

amed *Mēdias*, one of Lyco's contemporaries. This particular passage would be better cited in support of B's reading (*Mēdion*), but more importantly, this man is nowhere said to have been the husband of Pythias or the father of the younger Aristotle, except in the present passage, which is considered corrupt. The correction of the name to *Mētrodorou* thus appears correct.

44-6 Many scholars, among them Ambrosius, Stephanus, Cobet, and Hicks, construe *suneirētai* as perfect passive indicative of *suneipein* or *sumphanai*, "to speak with" or "to agree." Others, including Roeper 657 and Gelpi 322, take the verb as present passive subjunctive of *suneirein*, "to connect" or "to continue." The latter is more likely correct: *hopōs* is not an adverb of manner ("as"), but a final conjunctive particle ("in order that") introducing a purpose clause dependent upon the jussive infinitive *sunepeleisthai*. The subject of *suneirētai* is *ta therapeuomena*. The addition of the article is due to Cobet and makes clear that the participle *therapeuomena* is being used substantively as subject of the verb. It also makes clear that the prepositional phrase *peri*—*peripaton* goes closely with *therapeuomena*. Instead of adding *ta* after *sumbanta* with Cobet, Roeper suggested reading . . . *sumban, ta*. Both emendations intend the same thing, namely, to provide *therapeuomena* with a definite article. I have followed Cobet's restoration rather than Roeper's since the haplographic omission of *ta* seems palaeographically somewhat simpler, and therefore more likely, than a spelling error of *ta* for *to* and incorrect word division, i.e., *sumbanta* for *sumban, ta*.

A different problem with this passage is raised by the mention of Theophrastus' will in Harpocration's *Lexicon*, s.v. *orgeōnas* (vol.1 p.224.17–225.6 Dindorf):

orgeōnas: There is a speech of Isaeus *Regarding the Orgeōnes*, and *orgeōnes* are those who assemble to honor gods or heroes. For *orgiazein* means to sacrifice and to do what is customary, either because of the stretching out of the hands (*to oregein*) or because of the secret rites (*ta orgia*) or on account of doing what is holy in the sacred precincts and the groves (*en tais orgasi kai tois alsesi*). However, the poets used to apply the name simply to the priests, as (does) Antimachus somewhere and Aeschylus in *The Mysians*. Possibly later it became customary for certain men to come together to honor the dead and likewise to be called *orgeōnes*, as is to be seen from the will of Theophrastus.

However, since there is no mention of *orgeōnes* in Theophrastus' will, we are constrained to ask what Harpocration meant. In his article he gives a definition, three etymologies, and two citations of the use of the word, which bring out the religious and ritual element.⁶⁰ There follows an explanation of another usage which is a variation on the first definition—gods

and heroes are replaced by dead humans as objects of ritual worship. He cites Theophrastus' will for this usage, but the manner in which he introduces this example seems to indicate that we must extract the definition from the instance cited. It is not a confirmation of a meaning of *orgeōnes* which is well established, but the basis for a different meaning, one which Harpocraton hypothesizes from its single occurrence. This is apparently why Harpocraton says *mēpote hysteron*, "possibly later." Unfortunately, Harpocraton did not specify the passage in which *orgeōnes* occurred.⁶¹

Unless the name of Theophrastus is an error made by Harpocraton himself or by some copyist in the course of transmission of Harpocraton's text, both of which seem unlikely,⁶² we must assume that Harpocraton's citation is reliable and that *orgeōnes* was in his copy of Theophrastus' will. Salmasius, cited by Ménage 640-1,⁶³ having considered what Harpocraton reports, tried to introduce *orgeōnes* into the text of Theophrastus' will, proposing to insert *hypo tōn orgeōnōn* before *therapeuomena*. This destroys a perfectly good phrase and for this reason seems to be incorrect. The change would support the view of the Peripatetic school as a religious organization,⁶⁴ but in this case the members will not have been *thiasōtai tōn Mousōn*;⁶⁵ instead they will have been *orgeōnes epi timēi tou Theophrastou suniontes*. Not only does the organization of the school as a hero-cult ritually worshipping its dead leader Theophrastus seem highly unlikely, but it is also incredible that Theophrastus would have ordered such posthumous rites and honors for himself.

The word may not, however, have been where Salmasius wanted to restore it, but rather in another passage of the will which has religious overtones. Herwig Görgemanns has suggested to me that the word may have stood in place of *koinōnountes* in line 335. It may have been a marginal note of some interpreter who was attempting to specify *koinōnountes*. If so, *orgeōnes* was not a part of Theophrastus' original text, but a gloss which at some later time was introduced into it. This explanation may exonerate Harpocraton of misquotation, but it does not justify inserting the word *orgeōnes* into Diogenes' text of Theophrastus' will.

383-4 All manuscripts examined except C have *antigrapha*. C has *antigraphai*, which cannot be correct since the adjective has only two endings. Reiske 312, wanting the word to be strictly adjectival, conjectured *antigraphoi*. But the word is probably to be taken substantively here; it stands in apposition to *hai diathēkai*.⁶⁶ The suggestion of Richards 346 that one should read *kat' antigrapha* is interesting, but unnecessary.

ADDITIONAL REFERENCES

In addition to works listed in section III (see *Conspectus nominum quae in apparatibus criticis inveniuntur*), the following works are cited, by author:

- iedl = A. Biedl, *Zur Textgeschichte des Laertios Diogenes: Das grosse Exzerpt Phi*, Studi e testi 184 (Vatican 1955).
- onnet = M. Bonnet, "Die Pariser Handschriften des Laertios Diogenes," *RhM* 32 (1877) 578–90.
- elatte = A. Delatte, *La vie de Pythagore de Diogène Laerce*. Acad. royale de Belgique. Cl. des lett. et des sci. mor. et pol. Memoires: sér. 2, vol. 17.2 (Brussels 1922).
- Diels = H. Diels, Review of I. Bywater, *Heracliti Ephesii Reliquiae* (Oxford 1877) in: *Jenaer Litteraturzeitung* 4 (1877) 393–95.
- Donzelli (1) = G. Donzelli, "I codici PQWCoHIEYJb nella tradizione di Diogene Laerzio," *Studi italiani di filologia classica* 32 (1960) 159–99.
- Donzelli (2) = G. Donzelli, "Per un'edizione critica di Diogene Laerzio: I codici VUDGS," *Bollettino per la preparazione della edizione di classici Greci e Latini* 8 (1960) 93–132.
- Gercke (1) = A. Gercke, Review of E. Martini (1) in: *Deutsche Literaturzeitung für Kritik der Internationalen Wissenschaft* 21 (1900) 170–73.
- Gercke (2) = A. Gercke, "Die Überlieferung des Diogenes Laertios," *Hermes* 37 (1902) 401–34.
- Hicks = R.D. Hicks, *Diogenes Laertius, Lives of Eminent Philosophers* (Cambridge, Mass. 1925; rpt. 1980).
- Long = H.S. Long, *Diogenis Laertii Vitae Philosophorum* (Oxford 1964).
- Martini (1) = E. Martini, "Analecta Laertiana pars prima," *Leipziger Studien zur classischen Philologie* 19 (1899) 75–177.
- Martini (2) = E. Martini, "Zur handschriftlichen Überlieferung des Laertios Diogenes," *RhM* 55 (1900) 612–35.
- Moraux = P. Moraux, *Les listes anciennes des ouvrages d'Aristote* (Louvain 1951).
- Mühlh = P. von der Mühlh, *Epicuri Epistulae Tres et Ratae Sententiae a Laertio Diogene Servatae* (Stuttgart 1922).
- Rose (1) = V. Rose, *De Aristotelis librorum ordine et auctoritate* (Diss. Berlin 1854).
- Rose (2) = V. Rose, *Aristoteles Pseudepigraphus* (Leipzig 1863).
- Wachsmuth = C. Wachsmuth, *Sillographorum Graecorum Reliquiae*, fasc. 2: *Corpusculum Poesis Epicae Graecae Ludibundae* (Leipzig 1885).
- Zeller = E. Zeller, *Die Philosophie der Griechen in ihrer geschichtlichen Entwicklung*, 3rd ed., vol. 2.2 (Leipzig 1879).

NOTES

wish to express my thanks to Professor William Fortenbaugh, who read and commented on this material in every stage of its composition. My thanks also go to Professors Herwig Görgemanns, Dimitri Gutas, Pamela Huby, John Keaney, and Robert Sharples, all of whom offered timely suggestions.

1. Either of two late manuscripts G or S (manuscript *sigla* are used in the introduction, commentary, and notes and explained at the beginning of section III), appears to have been used according to Düring 24 and Biedl 9 n.3. The Latin translation of Ambrogio Traversari may also have been consulted, for it was completed ca. 1431 in Rome, republished there in 1475 and elsewhere in succeeding years.
2. In his introduction Usener says he used collations of A, C, F, G, H, and M (=N); the editions of Aldus, Frobenius, Stephanus (Paris 1570) and Thomas Aldobrandinus (Rome 1594); and the translations of Traversari and Aldobrandinus.

3. The *sigla*, names and dates of thirty-six of these will be found listed by Long vol.1 p.xx, and Biedl 110-11. The two other manuscripts are codex Matritensis Gr. 4676 (=Matr.; see Düring 14) and codex Vat. Gr. 1144 f. 211^r - 225^v (see R. Pintaudi, "Un excerptum dalle vite di Diogene Laerzio: Vat. Gr. 1144," *Sileno: Rivista di studi classici e cristiani* 1 (1975) 188-90. There are many more manuscripts containing excerpts from Diogenes' work, but none seems to have extensive material.
4. The *excerpta* not only lack context by virtue of having been excerpted, but have also been altered (by changes in verb forms, omission of connective particles, etc.) in order to be properly phrased. Further, none of these manuscripts has any passages from Theophrastus' life *in extenso*, but all derive from the anecdotal material and apophthegms.
5. All seven manuscripts belong to the so-called *editio vulgata* and to those groups or families of manuscripts which are otherwise represented in the present recension.
6. V. Rose, "Die Lücke im Diogenes Laërtius und der alte Übersetzer," *Hermes* 1 (1866) 368-72, first brought this to the attention of scholars. See also Martini (1) 104-6; Düring 15-16.
7. See, among others, Diels 394-5; Wachsmuth 51; Usener, *Epicurea* (Leipzig 1887) vi-vii; Gercke (2) 405; Delatte 63-65, 72-74; Mühlh iv; Biedl 24-25; and Düring 13-14, 19.
8. Martini (1) 88-89 claimed to be able to discern as many as eight different hands in P. See also Delatte 65-66; Donzelli (1) 160-61.
9. The same conclusion is reached by Usener, *Epicurea* (Leipzig 1887) vi-xiii; Martini (1) 122-33; Gercke (1) 171-73; Delatte 70-2, 95; and L. Tartaglia, "Probabile cognatio dei codici Neapolitanus Burbonicus III B 29 (=B) e Parisinus Gr. 1759 (=P) di Diogene Laerzio," *Vichiana* 3 (1974) 314-21.
10. Diels 394 first suspected that Q was an early copy of P. This was first conclusively proved, relative to D.L. 9.1-17 and 10.35-83, by Bonnet 581-90, and for various other portions of the text by Martini (1) 158-59 and Donzelli (1) 165, 181-90. For Co as another early copy of P see Mühlh iv; Düring 17-18; and Donzelli (1) 157, 181-90.
11. Düring 19; cf. Biedl 24-25.
12. Martini (1) 106-53 and (2) 613-24 tried to show that these manuscripts did form a separate tradition, but he was decisively refuted by Gercke (1) 170-73 and (2) 404 ff. and Delatte 68-69, 75-95.
13. See Düring 14-15, who makes the same divisions.
14. I have adopted only one reading from this group which is not found in Group 1 manuscripts or V or W: the reading of d and c in 5.46 line 189.
15. The exact source of these interpolations in W does not seem to be ascertainable. Nevertheless, admirable attempts to sort them out are made by Martini (1) 160-62 and Donzelli (1) 166-67, 181-90.
16. See Wachsmuth 53-54; Martini (1) 162-68; and Donzelli (1) 190-96.
17. Düring 14 and 22 also classes M, cod. Marcianus Gr. 393, with these two. I have not been able to verify his claim since I have only examined A, relying on the selective readings of N provided by others.
18. Martini (1) 152; Mühlh v; Delatte 91, 97; Biedl 33 n.2; and Donzelli, "De Diogenis Laertii editione quae princeps vocatur eiusque cum codice Lobkowiciano (Z) cognatione," *Maia* 10 (1958) 317-23.

For a detailed history of the possession of Z see E. Gollob, "Verzeichnis der griechischen Handschriften in Österreich ausserhalb Wiens," *Sitzungsber. Wien Akad.*, phil.-hist. Kl. 146.7 (1903) 112–13, 134–36; and Donzelli, note 18 above. It is worth underlining that the manuscript in question was of no special merit, being a copy of one member of the *editio vulgata*. On the basis of Frobenius' text, we can say that it had many readings in common with c and others with d, and that it seems to have belonged to the family of V, specifically to subgroup c. See Düring 14, 22.

In rare instances the horizontal succession of titles separated by a Greek semicolon appears in the apparatus criticus, but only when there is some question as to the correct division of a title.

Cf. the inversion *Alkydēn* for *Lacydēn* in B at 5.41. It is possible that *Lakippou* is a misunderstanding of *Leukippou*; the diphthong *eu* appears remarkably similar to *a* in many manuscripts and as a result may be easily mistaken for it.

Prosopographia Attica (Berlin 1901) vol.1 p.51 nos. 634–37.

See also J. Öhler, "*Euergetēs*," no.2, *RE* 6 (1909) 978–81, who lists several occurrences of conferrals of the title in inscriptions of the fourth century B.C.

See the remarks of A. Kleingünther, *Prōtos Heuretēs: Untersuchungen zur Geschichte einer Fragestellung*, *Philologus Suppl.* 26.1 (Leipzig 1933).

De vita ac miraculis S. Theclae virginis martyris Iconiensis 2.29 (*PG* vol.85 col.612D–613A). G. Glotz, "Les fêtes d'Adonis sous Ptolémée II," *RÉG* 33 (1920) 202, provides a helpful discussion of the word and its usage.

Many scholars have adopted Ménage's conjecture, among them Wilamowitz, *Hellenistische Dichtung in der Zeit des Kallimachos* (Berlin 1924) vol.1 p.64; Regenbogen 1359; Apelt 269; and Wehrli 27. Meibom inserts *se* into his translation (Amsterdam 1692) and Cobet more tentatively adds (*se?*), but neither introduces a corresponding *hauton* into the Greek text.

This is what Ménage calls the Parisian manuscripts P and Q. He reports them correctly.

"Über die Schicksale der Aristotelischen Bücher und einige Kriterien ihrer Ächtheit," *RhM* 1 (1827) 268 n.67. He has been followed in this by Schmidt 23; Usener 3; Regenbogen 1381; and C. Prantl, *Geschichte der Logik im Abendland* (Leipzig 1885) vol.1 p.350 n.11.

Solmsen, *Die Entwicklung der Aristotelischen Logik und Rhetorik*, *Neue philologische Untersuchungen* 4 (Berlin 1929) 69–70 n.1.

Ibid.; and Bocheński 30–31.

Diogenes' catalog of Theophrastus' writings is composed of several lists. These are distributed as follows:

List I: 5.42–6, lines 79–188

List II: 5.46–8, lines 189–255

List III: 5.48–50, lines 256–82

List IV: 5.50, lines 283–97

List V: 5.50, lines 298–302 (or 304)

Lists I, II, IV, and V are alphabetically arranged according to the first letter of the most important word in each title. Prepositions and articles are disregarded for the purpose of alphabetization. No attempt has been made to alphabetize the titles beyond the first letter of the chief word. One will find, however, that there are occasional disruptions of the alphabetical progression, some of which

are due to the loss of words in the manuscripts, some to the misplacement of titles by later editors and scribes. List III exhibits no apparent order or scheme of organization. It is significant that of all the different book lists offered by Diogenes, only Theophrastus' is alphabetical, or at least largely so. The source of Diogenes' catalog of Theophrastean writings and the reason for the separate lists is a very complex issue which cannot be discussed here. See Usener 22-4, E. Howald, "Die Schriftenverzeichnisse des Aristoteles und des Theophrast," *Hermes* 55 (1920) 204-21; Regenbogen 1368-74; Moraux 14, 211-14, 247-48; and Fortenbaugh comm. to S46. In addition, see my remarks below on line 304 of Diogenes' text.

33. He is followed by D.E. Eichholz, *Theophrastus De Lapidibus* (Oxford 1965) 118.
34. For this reason Steinmetz 305 prefers Usener's emendation.
35. One might argue that alpha and lambda are easily and often confused in uncial manuscripts and that the scribe of B has simply erred in transcription. But since *aithoumenôn* is alphabetically correct, it seems more likely that the error was made by the scribes who mistook alpha for lambda and wrote *lithoumenôn*.
36. One may object that in both cases reference to a separate discussion may be to *De igne*. Diogenes records that work as containing two books (5.45 line 162), and since the fragment preserved from this work (fr. 3 Wimmer) seems to be from only one book, the reference to a discussion of "burning things" might be to the other volume.
37. Regenbogen 1407, 1422 and Steinmetz 312 also consider these sections of the *De mir. ausc.* to be Theophrastean.
38. Lipara (34); Psittacus and Media (35); and Etna (38, 40). Antigonus, *Hist. mir.* 130 (145), has a passage very similar to *De mir. ausc.* 40 concerning the flaming lava flow in Etna. Antigonus specifies the locus of the phenomenon as the Aetolian islands, but these are near Sicily. More importantly, Antigonus explicitly ascribes the observation to Theophrastus.
39. *Diokles von Karystos: Die griechische Medizin und die Schule des Aristoteles* (Berlin 1938) 116.
40. Rose is followed by Usener 13 and Regenbogen 1364, 1424, and 1429-30.
41. E.g., Speusippus (4.4); Xenocrates (4.14); Aristotle (5.25); and Heraclides Ponticus (5.88).
42. Adrastus ap. Athen. 15.673E; Michael of Ephesus, *In Arist. EN* 5.1 1129b29-30 (*CIAG* vol.22.3 p.8.12); and Anonymus, *In Arist. EN* 4.2 1121a7 (*CIAG* vol.20 p.180.17) and 5.1 1129b29-30 (p.210.15-17), all of which are listed under S1 by Fortenbaugh.
43. For further details see Rose (1) 7-8; Usener 14; and Regenbogen 1429-30.
44. Zeller 864-5 n.5 and Regenbogen 1519 note that the title may have been *Peri nomothetôn*. But the title is perfectly intelligible without *Peri* and, furthermore, such an addition will not save the order, for prepositions are irrelevant for the purpose of alphabetization.
45. Casaubon has been followed by all later editors of Diogenes except Long, who retains the manuscripts' *phusikôn* in both cases.
46. *De interpretatione* is cited by Philoponus, *In Arist. Cat.* prooem. (*CIAG* vol.13.1 p.7.20-2); for Arabic citations see Gutas, catalog no.2. *Categories* is also cited by Philoponus; Olympiodorus, *Proll. log. et in Arist. Cat.* prooem. (*CIAG* vol.12.1 p.13.24-6, 30 and 34-5); Anonymous, *In Porph. Isag.* 1.3 (cod. Laur. 'Oceanus' 85.1 f.17 = Rose [2] 129); David, *In Porph. Isag.* 1.3 (*CIAG* vol.18.2 p.102.4); and [Elias], *In Porph. Isag.* 1.3-4 (p.63.22-4 Westerink). Arabic citations are

- listed by Gutas, catalog no.1. Theophrastus' *Ethics* is cited by Anonymous, *In Arist. EN* 5.1 1129b29–30 (*CIAG* vol.20 p.210.15–16); Aspasius, *In Arist. EN* 7.15 1154b6–15 (*CIAG* vol.19.1 p.156.17); Michael of Ephesus, *In Arist. EN* 5.1 1129b29–30 (*CIAG* vol.22.3 p.8.12–13); Plutarch, *Pericles*, 38.2; and as *Moralia* by Fulgentius, *Mitologiae* 2.1 (p.39 Helm), all of which are found listed under S2 by Fortenbaugh.
8. Cf. Aristotle, *EE/EN* 5.7 1135a8–15.
9. I am grateful to Mrs. Pamela Huby for suggesting this to me.
10. For similar explanations of (mis)placement see the previous remarks on lines 154 and 200.
11. 5.42 lines 84–85, 5.45 line 152, 5.48 line 254, and 5.50 lines 302–4.
12. Usener 11 and Gigante 219 n.54 likewise retain the manuscript reading of one title. See also the remarks of Fortenbaugh comm. to S13.
13. *hypnēmata* is not in any manuscript and may be a typographical error. Regenbogen 1534 may be influenced by Usener when he prints and daggers *taupnēmata*. For the addition *historika* Usener cites Köpke, *De hypomn. Gr.* (1842) 11.
14. This work is referred to by Athenaeus at 4.173E and 14.654D. Both passages are dissimilar in content: the first concerns anthropology and the second ornithology. If these are representative of the work as a whole, we may conclude that it was a collection of various notes, perhaps each of the six volumes dealing with a different topic. The scholion on Apollonius, which concerns vulcanology may refer to part of this work. Of course the scholiast may refer to some other work: e.g., *Peri rhuakos tou en Sikeliāi a'*, 5.49 line 277; *Metarsiologikōn a'b'*, 5.44 line 146; *Peri puros a'b'*, 5.45 line 162; or even to a wholly different work concerning historical matters which is not listed by Diogenes. See further Usener 12; Rose (1) 53 and (2) 561–3; and Regenbogen 1540.
15. The other manuscript of Group 1, F, has only *Pōs—oikointo a'* and omits *hypomnēmata* altogether.
16. I.A. Fabricius, *Bibliotheca Graeca*, 3rd ed., by G.C. Harles (Hamburg 1793) vol. 3 p.445, seems to have been the first modern scholar to recognize that Theophrastus' catalog of writings consists of separate lists. But he and others after him have discerned only four lists, while I distinguish five (or even six). See above, note 32.
17. Meurs 628 made the same conjecture, but for a different reason. He did not realize that the list is alphabetical, but knew that Cicero, *Orator* 51.170–2, remarks that Theophrastus discussed rhythm.
18. According to Sextus it was her third marriage. She married Nicanor first, but he died ca. 318 B.C. She next married Procles and bore him two sons, Procles and Demaratus, both students of Theophrastus. Third, she married Metrodorus. See H. Schmitt, "Pythias," no.2, *RE* 24 (1963) 548–49; Düring 208–9.
19. "Aristoteles," no.19, *RE* 2 (1896) 1055.
20. "Meidias," no.1, *RE* 15 (1932) 1482–83.
21. The social element of the *orgeōnes* which is often stressed in the studies of modern scholars, e.g., W.S. Ferguson, "The Attic Orgeones," *Harvard Theological Review* 37 (1944) 61–130; M. Guarducci, "Orgeoni e tiasoti," *Rivista filologica d'istruzione classica* 13 (1935) 332–40; and S. Dow and D.H. Gill, "The Greek Cult Table," *AJA* 69 (1965) 103–14, and which would make the *orgeōnes* into a brotherhood, a fraternity or a club, is curiously missing from Harpocraton's article.
22. I owe this analysis of Harpocraton to Herwig Görgemanns.

62. The *Suda*, s.v. *orgeōnes* (no.512 part-3 p.553.5–13 Adler), has the same information practically verbatim.
63. Since the text was prepared I have obtained Salmasius' book (see the listing of it in the *Conspectus nominum quae in apparatus criticis inveniuntur*, which immediately precedes the Greek text) and, indeed, Ménage quotes Salmasius correctly. In the apparatus criticus I have recorded *sunietai* (*sic*) Salmasius ap. Ménage. *Sic* refers to the accent on *sunietai*, which Salmasius (and Ménage) placed over the iota rather than the eta. This is a typographical error, for in the rest of Salmasius' quotation and restoration of this passage from Theophrastus' will other accents are also misplaced.
64. Wilamowitz, *Antigonos von Karystos*, *Philologische Untersuchungen* 4 (Berlin 1881) 263–79, surmised from several indications in the will, e.g., the presence of a museum on school grounds (lines 312, 316–17), a *hieron* (lines 314–16, 324, and 332), statues of the Muses (line 312), an altar (line 319), and the implication of a *koinōnia* (from *koinēi* in line 332 and *koinōnountes* in line 335) that the Peripatetic school was a legally sanctioned cult of the Muses, a *thiasos tôn Mousōn*. This interpretation, which has commanded a large following, is convincingly refuted by J.P. Lynch, *Aristotle's School: A Study of a Greek Educational Institution* (Berkeley 1972) 108–27, and H. Gortschalk, "Notes on the Wills of the Peripatetic Scholarchs," *Hermes* 100 (1972) 328–29.
65. This is what Wilamowitz (note 64 above) wanted the members of the school to be called.
66. See the remarks of Ménage 642 on the appositional usage of *antigrapha*.

2

The Life, Works, and Sayings of Theophrastus in the Arabic Tradition

Dimitri Gutas

Contents

- I. Introduction
 - Method
 - Sources
 - Bibliography and Abbreviations
- II. The Life of Theophrastus in Arabic
 - The Gnomological Tradition: From the *Siwān al-ḥikma*
 - The Bio-Bibliographical Tradition: The *Fihrist* and Its Derivatives
 - An Eclectic text: Mubaššir
 - Miscellaneous Reports
- III. The Works of Theophrastus in Arabic
 - List of Works
 - Miscellaneous Reports on Theophrastus' Literary and Philosophical Activity
- IV. Sayings of Theophrastus in Arabic
 - From the *Siwān al-ḥikma*
 - From Mubaššir
 - Sayings from Various Sources
 - Concordance of the Sayings
- Appendix A: The Transmission of Saying [11]
- Appendix B: Unedited Arabic Texts
- Notes

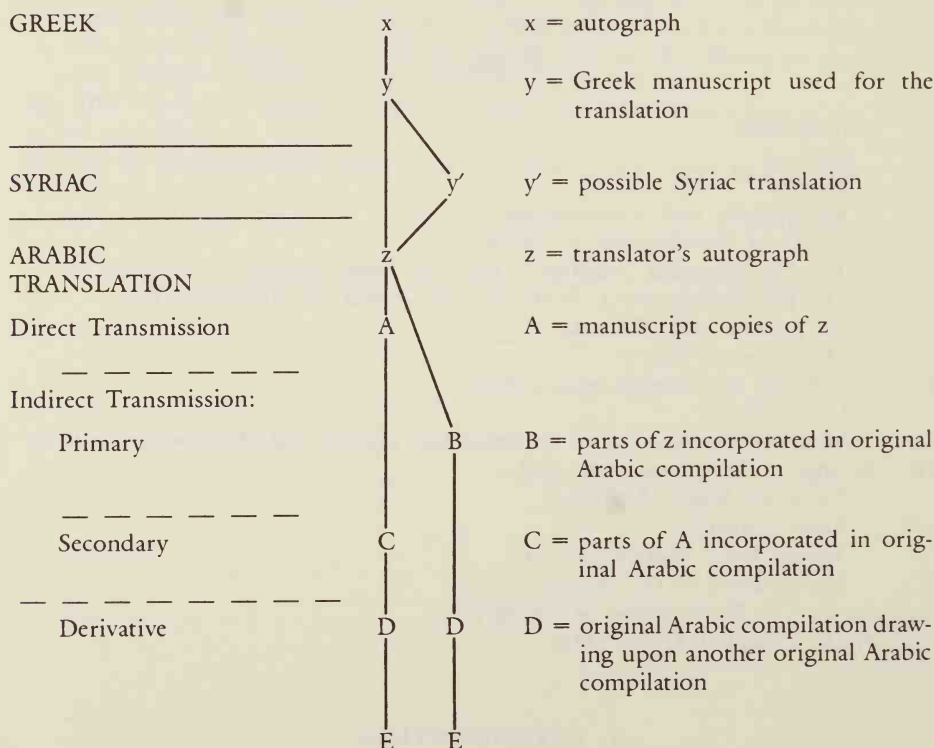
I. INTRODUCTION

The importance of Arabic sources for the recovery of lost Greek works and the textual improvement of those extant has long been recognized by both classicists and Arabists. However, what may not be as widely known among the former and hardly ever addressed by the latter, is how to evaluate and use the Greek material extant in Arabic as a source for classical studies.

Since the present volume will find its audience primarily among classicists, it is appropriate that I dilate here somewhat upon this problem in order to facilitate communication between them and Arabists.¹

METHOD

A written document undergoes alteration in the process of its physical transmission from the moment of its origin to the final state in which it has been preserved. Assessing the relation which the extant document bears to its lost archetype constitutes the foundation of all textual criticism; it also plays a major role in analyzing the transmission of Greek material into Arabic and subsequently within Arabic. What has to be specified and defined is the nature and modes of the alteration. The discussion below, necessarily theoretical and general, refers to the following diagram:



Greek material actually available in Arabic, in translations originally made in the eighth through the tenth centuries A.D., is extant either (1) as an independent text in manuscript copies of the original Arabic translation itself (direct transmission: A; in the main we do not possess autograph manuscripts by the translators: z) or (2) as fragments, quotations, paraphrases,

epitomes, excerpts, imitations, etc., extracted from the original Arabic translation by subsequent compilers (indirect transmission, *Nebenüberlieferung*: B,C,D).

1. Directly transmitted Greek material consists of Arabic translations of independent works, predominantly of a philosophical and scientific nature (Aristotle, Galen), extant in autonomous manuscript copies. The Greek original of the translated work may either be lost or survive.

1.i. In preparing critical editions of lost Greek works on the basis of the manuscripts of the translation, the *recensio* and *emendatio* of the text are made very much along the lines established in classical scholarship (as outlined by P. Maas, for example). The aim of the edition is to produce a text that is as close as possible to the translator's autograph [z]. The question of the fidelity of the translation to the Greek manuscript(s) upon which it was based is a different issue that cannot be properly addressed at present.

1.ii. Editions of Arabic translations of surviving Greek works also follow, in the process of *recensio*, the guidelines of classical scholarship; the *examinatio*, on the other hand, takes into consideration not only the usual scribal corruptions due to the transmission of the translated text within the Arabic tradition, but also corruptions or alterations that are identifiable through a comparison with the original Greek and can be ascribed to the translation process from Greek into a possible Syriac intermediary [y'] and then into Arabic [z], or from Greek directly into Arabic [z]. The result of the *recensio* and *examinatio*, with judicious *emendatio* whenever called for, will be to reconstruct the readings of the Greek manuscript [y] which formed the basis of the translation,² not, of course, the Greek original [x]. In the majority of cases the Greek manuscripts used by the Arabic translators are uncials dating in all probability from approximately the fifth to the ninth centuries.³ In the case of works by late Alexandrian scholars (Olympiodorus and his pupils, for example), there is a distinct possibility that some Greek manuscripts used for the Arabic translations were actually authors' autographs [i.e., y = x]; for earlier works, however, such a possibility has to be discounted. The primary significance of the Arabic translations of surviving Greek works consists in enabling the recovery of textual witnesses chronologically prior to the oldest extant Greek paper manuscripts.⁴

2. Greek material transmitted indirectly into Arabic presents a far more complicated picture. It consists of texts incorporated in original Arabic compilations (biographies, anthologies, literary works, etc.) by authors who used as their sources the directly transmitted Arabic translations. The translated Greek work may again be either extant or lost in the original. If it is extant, indirectly transmitted translation either reflects accurately the translator's text, in which case the procedure described in the preceding paragraph (1.ii) is followed, or contains corruptions and alterations, in which

case its value as a textual witness for the Greek original is greatly diminished. If it is lost, on the other hand, assessing and establishing the philological reliability of the indirectly transmitted translation, and evaluating the cogency, historical accuracy, and authenticity of its contents are delicate tasks most easily susceptible to error. There are two major areas where difficulties are encountered and which call for the textual critic's vigilance: One concerns (i) the itinerary of the indirect transmission, i.e., the successive stages through which a work was transmitted before it became objectively available to the author of the original Arabic compilation, and the other (ii) the editorial policy he followed, i.e., the subjective use he made of his source in his work.

2.i. In the former case, it is important to acknowledge that indirect transmission is by no means homogeneous and that the following discriminations ought to be made: the author of the original Arabic compilation may have used as his source for the translated Greek text he is quoting either the autograph of the Arabic translator (primary indirect transmission: B), or a manuscript copy, at some unspecified remove, of the translator's autograph (secondary indirect transmission: C), or the original Arabic work of another author who himself had incorporated the translated Greek text in question in either of the two ways just mentioned (derivative indirect transmission: D); the derivative indirect transmission, moreover, may be reproduced indefinitely, i.e., E copying from D, F from E, etc.

2.ii. In the latter case, because in indirect transmission we are dealing with Arabic authors who compiled original and autonomous works with a specific purpose in mind and not with scribes bound by duty accurately to reproduce the text they were copying, evaluation of the authenticity and integrity of the translated Greek text must inevitably be based on an assessment of the style and editorial policy of the Arabic author involved. A mistake frequently committed in this area is to treat Arabic authors who happen to incorporate some Greek text in their works as independent manuscript witnesses and equal in reliability. This may indeed be the case in certain instances, but it is not given; it must be demonstrated. For the Arabic authors who compiled original works incorporating translated Greek texts were scholars who, first, knew no Greek and could not check—even if they had wished—the text they were transmitting, and second, came from various backgrounds, had different training, and used the Greek material for divergent reasons. Their activity, moreover, spans a period of many centuries, covers in geographical extent the entire Islamic world, and derives its material from numerous sources transmitted in all of the ways listed above. Ibn an-Nadīm, for example, was a tenth-century book dealer in Baghdad, who wrote a bibliography on the basis of his professional acquaintance with the subject; Mubaššir was an eleventh-century high administrator in the Egyptian

court, a bibliophile, and a patron and amateur practitioner of philosophy and the sciences; Šahrastānī was a theologian active in the twelfth century in Iran, educated in the traditional Islamic sciences, and wrote from that perspective. Because of the great variety in their background, purpose, and approach, we find represented in their independent works all available methods of compilation: interpolation, omission, paraphrasing, glossing, etc.

The textual critic, who is faced with a certain translated Greek text surviving only in indirect transmission and has to establish the relation the text bears to that of the translator and ultimately to the Greek, has therefore a twofold task: he has to ascertain the level of indirect transmission at which the text was objectively encountered by the compiler (i.e., whether at level B, C, D, or E), and to determine the extent of editorial manipulation the text subjectively underwent in his hands. To achieve the former goal it is necessary to locate the generic tradition within which a certain text or a set of texts is transmitted and trace the stages of its transmission, if at all possible, to its point of entry into Arabic, i.e., the original translation. In order to achieve the latter goal the analysis has to be adapted to each individual case: it should proceed by a comparison of all available stages identified in the previous process and a scrutiny of variants, to determine the precise nature and provenance of each alteration. For the very process of transmission effects alterations, whether deliberate or accidental, which damage the specificity of a text and may so transform it as to make it resemble other, completely unrelated, texts; this may happen when a text encountered at the stage of derivative indirect transmission (levels D or E, for example) is associated—without regard to the history of the transmission—with a Greek text, to which it might bear an accidental resemblance.⁵

SOURCES

The Arabic sources for the life, works and sayings of Theophrastus are all extant—with the only possible exception of saying [28] in section IV below—in indirect transmission. That is to say, this information is found in original works by Arabic authors compiled from material already available in earlier translations. Furthermore, in the absence of specific information that these authors used the translator's autograph rather than manuscript copies of it, we must assume that the indirect transmission is not primary but secondary and derivative, i.e., represented by levels of transmission C, D, and E in the above diagram. It is important to keep this fact in mind in order to appreciate the analyses offered in this paper.

General information about Greek authors and their sayings is found predominantly in two genres or traditions of Arabic works: (1) in gnomologia, which also frequently include some biographical information, and (2) in bio-bibliographies, which may also include sayings.⁶ Although there were

many points of contact and cross-fertilization between these two traditions. On the whole they remained distinct in their historical development; it is therefore of value to keep them separate while investigating their respective sources. The information on Theophrastus thus falls naturally into these two categories; yet a third consists of Mubaššir's eclectic text. These are described in general terms below, while specific comments on the details of transmission are presented in each of the subsequent three sections containing the texts themselves.

The Gnomological Tradition. The *Šiwān al-ḥikma* (*The Depository of Wisdom Literature*) and its derivatives. The *Šiwān* is a gnomologium compiled around 1000 A.D. in the Eastern provinces of the Islamic empire, apparently by a minor philosopher.⁷ It draws upon material translated in previous centuries, and is clearly representative of secondary indirect transmission (level C). Unfortunately, both its directly transmitted sources (level A) and the original recension of the work itself (level C) are not extant. Instead there are preserved various abridgments in later recensions and numerous extracts in subsequent compilations, all representative of derivative indirect transmission (level D). To the extent that the text of the original recension of the *Šiwān* has survived in these abridgments and extracts, it can be reconstructed by combining and comparing all the evidence which they contain; and to the extent that the directly transmitted source material used by the original compiler of the *Šiwān* and by the compilers of other gnomologia is present in them, it can be reproduced through the comparison and collation of the reconstructed text of the original recension of the *Šiwān* with the other gnomologia. Before arriving at the directly transmitted material translated from the Greek, therefore, there lies the twofold task of tracing the derivative indirect transmission back to the secondary level, and that in turn back to the level of direct transmission. At present this task has been executed neither for the *Šiwān* itself nor for the Arabic gnomologia as a whole.⁸ It is in the context of this state of textual studies of the Arabic gnomologia that the information on Theophrastus provided by the *Šiwān* has to be evaluated.

The section on Theophrastus in the original *Šiwān*, then, is reconstructed on the basis of the four available witnesses representing derivative indirect transmission: two independent recensions, entitled *Muḥtaṣar* and *Muntaḥab* *Šiwān al-ḥikma* (*Abridgment* and *Selections from the Depository of Wisdom Literature*, respectively) and dating from around the turn of the thirteenth century, and the works of two authors, Šahrastānī's *Al-Milal wa-n-nihal* (*Religions and Sects*), a doxographic and heresiographic work written in 1127, and Šahrāzūrī's *Rawdat al-afrāḥ* (*Garden of Delights*), a gnomologium compiled in the second half of the thirteenth century. All four witnesses contain different selections from the original work and only partially overlap

with each other, so that it is possible, through their combination, to arrive at a fuller version of the entry on Theophrastus in the original *Šiwān*, although it cannot be determined whether this fuller version is also the entire original entry. The resulting text thus represents a tentative reconstruction of its transmission at the secondary indirect stage. It is tentative because the definitive edition of the text would have to depend on an overall analysis of the two recensions (the *Muntaḥab* and the *Muḥtaṣar*) as well as on an investigation of the compositional techniques and styles of Šahrastānī and Šahrāzūrī, all tasks yet to be undertaken. The transmission of the text in its direct stage, finally, can be traced only in the context of a future general edition of the Arabic gnomologia.

The Bio-bibliographical Tradition. *Al-Fihrist* (Index) and its derivatives. The *Fihrist* of Ibn an-Nadīm is a comprehensive bio-bibliographical catalog of all authors, both Arab and non-Arab, whose books were available in Arabic in 987. For Greek authors, Ibn an-Nadīm derived his information from material translated in the previous two centuries (direct transmission), from personal contact with scholars, and from direct observation in the practice of his trade as a book dealer; his work thus represents secondary indirect transmission (and also possibly primary, assuming that he might have had access to some translators' autographs). The *Fihrist* became the standard reference work of its kind, and was repeatedly drawn upon by later bibliographers who edited it with various degrees of alteration depending on their style, purpose, and additional information available to them.⁹

The *Fihrist* itself is extant, and can be compared in every instance with the derivative indirect transmission represented by the later bibliographers. In the case of Theophrastus, the entry in the *Fihrist* was used by Ibn Abī Uṣaybi'a in his '*Uyūn al-anbā' fī tabaqāt al-atibbā'* (*Essential Information on the Generations of Physicians*), whose final recension was completed in 1268, and by Zawzanī in his *Al-Muntaḥabāt min Aḥbār al-ḥukamā'* (*Selections from [al-Qiftī's] History of the Philosophers*), compiled in 1249. The latter was in turn used by Bar Hebraeus (d. 1286) in his *Muḥtaṣar ta'riḥ ad-duwal* (*Synoptic History of Dynasties*).

An Eclectic Text. Mubaššir b. Fātik's *Muḥtār al-ḥikam wa-maḥāsin al-kalim* (*Choicest Maxims and Best Sayings*) was compiled in 1048-49. The author drew on a variety of sources, including the gnomological and biographical traditions, which he combined apparently in order to present as comprehensive an entry as possible for each person treated.¹⁰ Mubaššir's sources and his use of them are still in need of detailed investigation.

Theophrastus is not accorded a separate entry by Mubaššir. Incidental information about his life is inserted, instead, in the section on the biography of Aristotle, while his scattered sayings are found in the penultimate chapter of the book, "Sayings by a Number of Philosophers Known by Name, for

None of Whom Enough Sayings are Recorded to Make a Special Chapter Possible." The contents of this chapter are also transmitted indirectly, both at the secondary and derivative stages.

These three categories of sources contain the bulk of the material about the life, works, and sayings of Theophrastus in Arabic and are treated exhaustively in this article. Additional information may be found in the form of discrete reports in various other sources, and these I have collected under the rubric "Miscellaneous Reports" in each of the following three sections. In this case I cannot claim comprehensiveness, for similar stray reports will undoubtedly be discovered in the future. Further, I have not taken into account incidental references to Theophrastus and reports in post-thirteenth-century bibliographers (e.g., Hājji Halīfā) which manifestly derive from the main sources listed above.

Since the material on Theophrastus in the biographical and gnomological traditions is transmitted indirectly at the secondary and derivative levels, and since it is not extant in Greek in its present form, I have presented it in this essay in a rationalized fashion according to the procedures discussed in the preceding section (paragraphs 2, 2i, 2ii). I have collected the texts into groups according to the generic categories specified above, and within each category I have laid out, wherever applicable, the various stages of the transmission in parallel columns. Locating the tradition to which a text belongs enables us to determine interdependent versions (i.e., stages of transmission), to identify the primary from the derivative stages, and to judge whether they derive from a single or multiple sources. Presenting interdependent texts (stages of transmission) in parallel columns exhibits their verbal congruence, enhances their variations, and exposes the stylistic peculiarities of the respective compilers. The column on the left always presents the earliest form of the translated text available to us; that on the right, the versions that derive from it. In these cases, the additions or omissions by later compilers are easily detected by a comparison of the two versions. In the cases where a translated text (not a composite one like that of Mubaššir) is extant only in one version and where I estimate a statement to be a later addition by a translator or compiler, I enclose it within parentheses. I indicate my own additions to the English translation with square brackets. My observations and comments on all these matters are presented in the notes.

The texts are followed first by references to the original sources, to translations into European languages whenever available, and to secondary literature. The references to secondary literature aim solely to assist in the comprehension of the text and not to be comprehensive, especially since much that is misleading may be found in this literature.¹¹ The references are followed by notes on the text, translation, and transmission. When my

translations differ from those of previous scholars, I have refrained from stating the reasons for the divergence except in cases where I felt that justification was in order. I have also refrained from discussing the contents of the texts unless such a discussion was relevant to the establishment of the reading in the text or the translation. My general comments about the transmission and possible transformation of the texts are intended to enable the classical scholar to assess more accurately their usefulness as sources in the field.

Most of the Arabic texts offered here in translation are readily available in print and are therefore not included. The Arabic texts of passages taken from unedited works are given in Appendix B. Although the editions of most of the works consulted are far from satisfactory, it was not feasible to prepare critical editions of the translated passages only.¹² I have accordingly used the standard editions, as indicated in the bibliography. In the case of the *Muntahab*, I based the translations on Dunlop's edition, and recorded in the notes any significant variants I followed or consulted in Dunlop's apparatus or Badawī's edition. For Šahrastānī I followed the text of Cureton and noted the instances where I departed from his readings on the basis of Kaylānī's edition, the edition of Cairo (1948), and the Yale manuscript. For Mubaššir I followed Badawī's edition, with only an occasional reference to the Istanbul MS Ahmet III, 3206.

BIBLIOGRAPHY AND ABBREVIATIONS

Altheim 3 = Franz Altheim, "Merw, Stadt der Übersetzer," in his *Geschichte der Hunnen*, vol. 3 (Berlin 1961) 110-40. Translation (pp. 131-34) of some of the sayings of Theophrastus reported by Šahrastānī, with comments by P. Moraux as reported privately to Altheim.

Altheim 5 = Franz Altheim, "Nestorianische Übersetzungen griechischer Philosophen," in his *Geschichte der Hunnen*, vol. 5 (Berlin 1962) 72-109. On pp. 95-96 there are some "Bemerkungen zu den Theophrastfragmenten" by O. Gigon, as reported privately to Altheim.

Altheim-Stiehl = Franz Altheim and Ruth Stiehl, "New Fragments of Greek Philosophers I: Empedocles, Democritus, Theophrastus in Arabic Translation," *East and West* 12 (1961) 3-18. On pp. 14-15 there is an English translation of Altheim 3, including Moraux's comments.

Ibn al-Hebraeus = Ibn al-'Ibrī, *Muḥtaṣar Ta'rīḥ ad-duwal*, ed. by A. Šāliḥānī (Beirut 1958 [1890]).

Baumstark *Aristoteles* = A. Baumstark, *Aristoteles bei den Syrern vom V.-VIII. Jahrhundert*, I (Leipzig 1900).

Carra de Vaux *Avertissement* = B. Carra de Vaux, *Maḥoudī, Le Livre de l'avertissement et de la revision* (Paris 1896).

Düring *Biographical Tradition* = I. Düring, *Aristotle in the Ancient Biographical Tradition* (Göteborg 1957).

IEP² = *The Encyclopaedia of Islam*, 2nd ed. (Leiden and London 1960ff.).

Ibn an-Nadīm = Ibn an-Nadīm, *Kitāb al-Fihrist*, ed. by G. Flügel (Leipzig 1871-72).

- Fortenbaugh = W.W. Fortenbaugh, *Quellen zur Ethik Theophrasts*, Studien zur antiken Philosophie 12 (Amsterdam 1984).
- GAS = Fuat Sezgin, *Geschichte des arabischen Schrifttums*, vols. 1ff. (Leiden 1967ff.).
- Gutas *Greek Wisdom* = D. Gutas, *Greek Wisdom Literature in Arabic Translation* (New Haven 1975).
- Gutas "Lives of Aristotle" = D. Gutas, "The Spurious and the Authentic in the Arabic Lives of Aristotle," *Pseudo-Aristotle in the Middle Ages*, ed. by J. Kraye, et al. (Warburg Institute Surveys XI, forthcoming).
- Haarbrücker = Theodor Haarbrücker, *Asch-Schahrastānī's Religionspartheien und Philosophenschulen*, 2 vols. (Halle 1850-51). Translation of Šahrastānī's text as edited by Cureton.
- Ḥunayn = Ḥunayn b. Ishāq, *Nawādir al-falāsifa*, MS Munich 651. See Gutas *Greek Wisdom* 38-39.
- IAU = Ibn Abī Uṣaybi'a, *'Uyūn al-anbā' fī ṭabaqāt al-aʿibbā'*, ed. by A. Müller, 2 vols. (Cairo-Königsberg 1882-84). See Gutas *Greek Wisdom* 40.
- Ibn Hindū = Ibn Hindū, *Al-Kalim ar-rūḥāniya*, ed. by M. al-Qabbānī (Cairo 1900). See Gutas *Greek Wisdom* 41.
- Köprülü 1608 = MS Istanbul Köprülü 1608. For a description of the contents of this gnomological manuscript see M. Grignaschi, "Quelques spécimens de la littérature Sassanide conservés dans les bibliothèques d'Istanbul," *Journal Asiatique* 254 (1966) 1-142.
- Lippert *Studien* = J. Lippert, *Studien auf dem Gebiete der griechisch-arabischen Übersetzungslitteratur* (Braunschweig 1894).
- Mas'ūdī *Tanbih* = Al-Mas'ūdī, *At-Tanbih wa-l-iṣrāf*, ed. by M.J. de Goeje ([Leiden 1894] Beirut 1968).
- Mubaššir = *Muḥṭār al-ḥikam wa-maḥāsin al-kalim* li-Abī l-Wafā' al-Mubaššir b. Fātik (*Los Bocados de Oro*), ed. by 'Abdurrahmān Badawī (Madrid 1958). References are to the page and line numbers of this edition.
- Mubaššir MS = MS Istanbul Ahmet III, 3206.
- Müller *Griechische Philosophen* = A. Müller, *Die griechischen Philosophen in der arabischen Überlieferung* (Halle 1872).
- Muḥṭaṣar* = See *Šiwān al-ḥikma*.
- Muntaḥab* = See *Šiwān al-ḥikma*.
- Paul, "The Element of Music" = MS Manisa Genel Kitaplık 1705.
- Rosenthal *Heritage* = F. Rosenthal, *The Classical Heritage in Islam* (London/Berkeley/Los Angeles 1975).
- Rosenthal "Ibn Durayd" = F. Rosenthal, "Sayings of the Ancients from Ibn Durayd's Kitāb al-Mujtanā," *Orientalia* 27 (1958) 29-54, 150-183.
- Rosenthal "Music" = F. Rosenthal, "Two Graeco-Arabic Works on Music," *Proceedings of the American Philosophical Society* 110,4 (1966) 261-68.
- Šahrastānī:
- C = William Cureton, *Book of Religious and Philosophical Sects*, by Muhammad al-Shahrastānī (London 1846).
- K = *Al-Milal wa-n-niḥal*, ed. by M.S. Kaylānī (Cairo 1967).
- Q = *Al-Milal wa-n-niḥal* (Cairo 1948).
- Y = MS Yale, Landberg 615.
- Šāhrazūri = *Nuzhat al-arwāḥ wa-rawḍat al-afrāḥ*, MS British Museum Add. 25738.
- Šiwān al-ḥikma*:
- Muntaḥab* = D.M. Dunlop, *The Muntakhab Šiwān al-ḥikmah of Abū Sulaimān as-Sijistānī* (The Hague 1979). References are to the lines in this edition.

- Muntaḥab* Badawī = *Šiwān al-ḥikma wa-talāt rasā'il*, ed. by 'Abdurrahmān Badawī (Tehran 1974).
- Muḥtaṣar* = MS Istanbul Fatih 3222. References are to the folio and line numbers of the manuscript.
- Stern "Mas'ūdī" = S.M. Stern, "Al-Mas'ūdī and the Philosopher al-Fārābī," *Al-Mas'ūdī Millenary Commemoration Volume*, ed. by S.M. Ahmad and A. Rahman (Aligarh 1960).
- Ullmann *Geheimwissenschaften* = M. Ullmann, *Die Natur- und Geheimwissenschaften im Islam* (Leiden/Köln 1972).
- Ullmann *Medicine* = M. Ullmann, *Islamic Medicine* (Edinburgh 1978).
- Ullmann *Medizin* = M. Ullmann, *Die Medizin im Islam* (Leiden/Köln 1970).
- Werner-Sonne = E. Werner and I. Sonne, "The Philosophy and Theory of Music in Judaeo-Arabic Literature," *Hebrew Union College Annual* 16 (1941) 251-319; 19 (1942-43) 511-73.
- = Az-Zawzanī, *Ibn al-Qiftī's Ta'riḥ al-ḥukamā'*, ed. by J. Lippert (Leipzig 1903).

II. THE LIFE OF THEOPHRASTUS IN ARABIC

The meager information on the life of Theophrastus available in Arabic indicates that none of it derives from a translation of a discrete *Bios Theophrastou* in Greek. The report transmitted in the gnomological tradition as represented by the *Šiwān* apparently derives from a similar collection in Greek which included both the biographical details and the sayings; the thrust of those details, however, suggests that the interest of their author (or compiler) was not so much to write a biography of Theophrastus as to indicate his position and function in the Aristotelian canon and tradition. Nevertheless, the specific information about the curricular duties of Theophrastus, Eudemus, and the unidentified third scholar may reflect some historical truth.

The biographical tradition offers very little, if any, specific information about the life of Theophrastus. Rather than reflect a homogeneous Greek source available to Ibn an-Nadīm in direct transmission, his report appears to have been compiled from bits of information strewn about in the literature: As discussed in the notes to the texts, the alleged family ties of Theophrastus with Aristotle apparently derive from Ḥaṣḥā b. Hunayn, the appointment of Theophrastus as executor of Aristotle's will from the document itself as it was known in Arabic through Ptolemy's *Vita Aristotelis*, and the succession to the head of the Lyceum from sources too general to be specified. Finally, Mubaššir's incidental information on Theophrastus is inserted in his biography of Aristotle and presents an eclectic text drawing upon a number of sources.

THE GNOMOLOGICAL TRADITION: FROM THE ŠIWĀN AL-ḤIKMA

Muntaḥab/Muḥtaṣar

[I] Theophrastus
 1. He was one of the companions and pupils of the philosopher Aristotle. Aristotle appointed him to succeed him after his death in his chair of philosophy.^a

Šahrastānī

[Ia] The Sayings of Theophrastus
 1. The man was one of the pupils and eminent companions of Aristotle. Aristotle appointed him to succeed him after his death in his chair of philosophy.

2. Theophrastus was assisted in the instruction of the students of philosophy and beginners, and in the performance of the tasks entrusted to him, by Eudemus and 'shwlws,^b both of whom were also among the eminent pupils of Aristotle.

3. He is the author of many books, significant works, and large commentaries on Aristotle's books, which are the fundamental texts.^c

2. Students of philosophy used to go to him frequently to learn from him.

3. He composed many commentaries

as well as independent^d works, especially about the musician^{e, f}

Text: [I] *Muntaḥab* 1171-75.

Muḥtaṣar f. 33v, 7-8.

[Ia] Šahrastānī 337.14-16.

Trans.: [Ia] Haarbrücker 2.197.29-35.

Altheim 3.131-32 = Altheim-Stiehl 15b.

a. The *Muḥtaṣar* contains only this paragraph.

b. The person whose name is variously spelled in the manuscripts of the *Šiwān* as 'shwlws and 'shywlws (with further variations elsewhere) remains unidentified. The following suggestions have been offered: Aeschryon (A. Müller in his edition of Ibn Abī Uṣaybi'a, "Lesarten" p. 10 *ad* p. 57.6; Ibn Abī Uṣaybi'a is quoting Mubaššir [below, text IV.1], who is quoting the *Šiwān* passage); Aeschylus (Lippert *Studien* 16 n. 3; Baumstark *Aristoteles* 124b), Andronicus (Düring *Biographical Tradition* 206). None of these appears to be convincing, since it is clear that a pupil of Aristotle and a fellow student of Theophrastus is meant (cf. Rosenthal *Heritage* 270 n. 15). In the *Muntaḥab* (1230-1259) this person is specifically identified as an eminent student of Aristotle, the equal of Theophrastus and Eudemus, and befriended and honored by Alexander. Among his sayings there are some proverbs and riddles with their explanations, which remind one of similar collections attributed to Dicaearchus and Clearchus; cf. F. Wehrli, *Die Schule des Aristoteles* (Basel 1944ff.), *Heft* I, frs. 100-103, and *Heft* III, frs. 63-95, respectively. Either one would be a more appropriate candidate for identification with the garbled Greek name in the Arabic.

c. Apart from the universally known fact that Theophrastus succeeded Aristotle as head of the Peripatos, paragraphs (1) and (3) of the *Muntaḥab* recension of the *Šiwān* do not provide any specific information other than commonplaces that are no more true of Theophrastus than of several other disciples of Aristotle. It is only the second paragraph, with the particular Greek names, which both offers some concrete information and guarantees the authenticity of the report—authenticity in the sense that it ultimately derives from the Greek, not that it is necessarily historically correct within the Greek tradition (cf. the discussion of the development of a tendentious history of philosophy in late Alexandrian Aristotelianism in my other essay in this volume, chapter 4). It would thus appear that paragraphs 1-3 reflect a translated text, although the extent of alteration, if any, to which it may have been subjected

either by the original compiler of the *Šiwān* or the recensor of the *Muntaḥab* cannot be determined. The designation of Aristotle's books as the "fundamental" or "principal" texts would point to the late Alexandrian period (post-fourth century A.D.) for the composition of the Greek source, for it was then that a conception of Aristotle as the founder of philosophy and the author of perfect philosophical works was formed (see my "Lives of Aristotle," part 1b). It is also possible, however, that the designation originated in the Arabic tradition, which inherited this conception of Aristotle.

d. "Independent works," i.e., works which express his personal ideas, *at-taṣānīf al-mu'tabara*. For this meaning of the word, cf. the title of Abū l-Barakāt's book, *Al-Mu'tabar*, and see the explanation by S. Pines in *ET*², vol. I, p. 112. Altheim mistranslates "geschätzt/eesteemed."

e. "Musician": the three printed texts of Šahrastānī and the Yale manuscript give different readings for this word: *mūsiqār* (Y; musician, composer of melodies), *mūsiqār* (C; musician, composer of melodies; Altheim wrongly transcribes the word in Cureton as *mūsikāz*), *mūsiqā* (Q; music), *mūsiqāt* (K; a musical instrument). The morphology of *mūsiqāt* is problematic and most likely corrupt; the only other attestation known to me is in the *Rasā'il Iḥwān aṣ-ṣafā'* 1.188 (Beirut): see L.I. al Faruqi, *An Annotated Glossary of Arabic Musical Terms* (Westport, Conn./London 1981) 211. Since neither the *Rasā'il* nor Šahrastānī's *Milal* is available in a critical edition, it is fruitless to speculate further. As for *mūsiqā*, it is attested only in C, and since it is spelled with an *alif* rather than the usual *alif maqṣūra*, it would appear to be a misprint or misreading of a manuscript reading *mūsiqā(r)* or *mūsiqā(t)*. (For the usual transcription and declension in Arabic of feminine Greek nouns in *ēta* see M. Ullmann, *Die Schrift des Rufus von Ephesos über die Gelbsucht*, Abh. d. Ak. d. Wiss. in Göttingen, Phil.-Hist. Kl.; Folge 3, no. 138 [Göttingen 1983] 63-64.) *Mūsiqār* thus seems to be the reading with the better attestation and, if my assumption that the phrase containing it was added by Šahrastānī himself is correct, as I argue below, it fits the context better. For the three sayings on music which Šahrastānī cites (nos. 11, 12, 14 in section IV below) do not concern musical instruments and deal not so much with music itself as with the psychic disposition of the musician or the composer of melodies, the *mūsiqār* (cf. the references in al Faruqi *Glossary* 210).

f. Šahrastānī reproduces and summarizes the report in the original *Šiwān*, with one modification. Among the sayings of Theophrastus which he next cites he found at least four (nos. 11-14, in section IV below) dealing with musical *ēthos*, and this led him to add in the biographical part of his entry that Theophrastus also wrote independent works (as opposed to commentaries) on the musician or composer of melodies. I tend to favor this explanation rather than the alternative hypothesis, namely, that Šahrastānī was using a source other than the *Šiwān* (see Chapter 3 in this volume), for the following formal reasons. A look at the concordance of the sayings of Theophrastus given at the end of this essay indicates that Šahrastānī follows the *order* of the sayings in the original *Šiwān* (with the exception of the transposition of sayings 17 and 18); the sayings on music (nos. 11, 12, 14) are *preceded* and *followed* by sayings taken from the *Šiwān* (nos. 1, 5, and 16, 17, 18); and the *Šiwān* contained at least one saying on music (no. 13) which, significantly, Šahrastānī does not cite. This circumstantial evidence weighs heavily in favor of the assumption that Šahrastānī did indeed use *only* the original *Šiwān* as his source; otherwise it would have to be assumed that he copied from it sayings 1 and 5, changed to a different source for the musical sayings of Theophrastus (nos. 11, 12, 14) precisely at the place where the *Šiwān* itself contained such sayings, at least one of which (no. 13) he did not

bother to cite, and then reverted to the *Šivān* for the remaining sayings (nos. 16, 17, 18). Had he done so, this would have implied an inordinate zeal on his part for both musical *ēthos* and Theophrastus, a zeal which he can hardly be said to have possessed. The explanation offered here for Šahrastānī's insertion of "the musician" implies that he took great liberties with the texts he was copying. That this was, in fact, his technique of composition is indicated by an overall assessment of his style, an example of which is offered in section IV below, saying [5], note b. Be that as it may, the matter can be resolved with greater certainty only after further investigation into the sources of Šahrastānī and the history of the Greek theory of *ēthos* in the Arabic tradition.

THE BIO-BIBLIOGRAPHICAL TRADITION:
THE FIHRIST AND ITS DERIVATIVES

Fihrist/IAU

[II] 1. Theophrastus was one of Aristotle's pupils and his sister's son.^a

He was also one of the executors whom Aristotle appointed [in his will]. Aristotle designated him to succeed as head of the School after his own death.

2. His books are: [there follows the list of the works; below, section III].

Text: [II] F 252.5-7 = IAU 1.69.22-23.

[IIa] Z 106.16-107.2 = Bar Hebraeus 55-56.

Trans.: [II] Rosenthal *Heritage* 29-30.

Müller *Griechische Philosophen* 34.

Zawzanī/Bar Hebraeus

[IIa] 1. Theophrastus the philosopher was the son of Aristotle's brother^a and one of his pupils who learned philosophy from him. He was also one of the executors whom Aristotle appointed [in his will]. He is the one who was promoted to head instruction in the School after Aristotle.

2. Theophrastus was quick-witted, learned, proficient, and meant for this career.^b People studied his uncle's^a books under him.

3. He composed significant works, which derived from and were based upon Aristotle.^c

4. His works are: [there follows the list of the works].^d

a. There is considerable variation in the sources on the precise nature of the alleged relationship of Theophrastus to Aristotle. Obviously the mistake was com-

pounded in the process of textual transmission, and the question is therefore to locate as far as possible its original form.

Ibn an-Nadīm, chronologically the earliest of the biographers treated here, has "the son of Aristotle's sister" both in the entry on Theophrastus given above and in his biography of Aristotle (*Fihrist* 247.19). Zawzanī (Qiftī), who copies Ibn an-Nadīm, has "the son of Aristotle's brother" in the entry on Theophrastus above, but this variant is due to missing or misplaced diacritical points in the Arabic (*ibn al-ḥalatihi/ibn al-ḥibi*). Similarly, the statement in paragraph [IIa]2 above, that "people studied his uncle's books with him," is an attempt at consistency on the part of Zawzanī (Qiftī) himself: since Theophrastus was, according to paragraph [IIa]1, Aristotle's brother's son, Aristotle was naturally his "paternal uncle" (*'amm*). That the version of Zawzanī (Qiftī) is due to a scribal error and not to an independent source is also indicated by the fact that in the biography of Aristotle he copies the *Fihrist* correctly and has "the son of Aristotle's sister" (Z 32.15). Bar Hebraeus, in his turn, is completely dependent upon Zawzanī. Thus, both Zawzanī and Bar Hebraeus can be eliminated from consideration as carriers of significant variants.

Ibn Abī Uṣaybi'a, who also copies from the *Fihrist*, substitutes "the son of Aristotle's maternal aunt" (*ibn ḥalatihi*) for "the son of Aristotle's sister," apparently for the sake of consistency: in his entry on Aristotle's life (IAU 1.57.8) which precedes that of Theophrastus in his book, he had copied the passage of Mubaššir (below, text [IV]2), who has "maternal aunt." Thus Ibn Abī Uṣaybi'a is also to be eliminated as an independent witness. This leaves us with the variants "maternal aunt" in Mubaššir and "sister" in Ibn an-Nadīm, and in either case the transmission can be traced one stage back.

The "maternal aunt" variant in Mubaššir is first encountered, as far as I am able to ascertain, in Mas'ūdī's *Funūn al-ma'ārif* (*Varieties of Knowledge*), a work composed between 947 and 956. The passage in which Theophrastus, "the son of Aristotle's maternal aunt," is mentioned (below, section III, text [II]) is apparently part of an account of the history of philosophical instruction and would seem to derive from a similar account by Fārābī (see this section, text [VII]) or from a source common to both (see Stern "Mas'ūdī" 28-41). Mubaššir could have drawn on any of these accounts, and thus the "maternal aunt" variant is to be sought in the sources of Fārābī and beyond into late Alexandrian Aristotelianism and its continuation in the Syro-Arabic milieu.

Ibn an-Nadīm, for his part, apparently drew his information from Ishāq b. Hunayn's *Ta'riḥ al-aṭibbā'* (*Chronology of the Physicians*), which was composed in 903 A.D. This work, which may or may not derive from a similar work by Philoponus, is extant both in an independent, but extremely defective, manuscript (direct transmission) and in extensive extracts in the *Šiwān* (secondary indirect transmission). (See F. Rosenthal, "Ishāq b. Hunayn's *Ta'riḥ al-aṭibbā'*," *Oriens* 7 [1954] 55-80; F.W. Zimmermann, "The Chronology of Ishāq b. Hunayn's *Ta'riḥ al-aṭibbā'*," *Arabica* 21 [1974] 324-30). In the extract preserved in the *Šiwān* (*Muntahab* 376, also copied by IAU 1.36.16), Theophrastus is expressly identified as "the son of Aristotle's sister." In the corresponding passage of the manuscript of Ishāq's work, the scribe deliberately omits the long list of names in which Theophrastus occurs (Rosenthal "Ishāq" 69.6, text; 79, translation).

The "sister" variant can thus be traced back to Ishāq b. Hunayn, but Ishāq himself can hardly be responsible for it. It has been repeatedly suggested that the statement is due to a "confusion" between the relationship of Plato to Speusippus and that of Aristotle to Theophrastus (Müller *Griechische Philosophen* 23 n. b, Lippert *Studien*

16 n. 4, Düring *Biographical Tradition* 207); it would seem that “deliberate transferral” would be a more accurate explanation, and its origin is perhaps to be sought in the tendentious historiography of philosophy in late Alexandrian times or, as Zimmermann suggests (“Chronology”), in the (Ps.-?) Philoponus of Ishāq’s source. The relationship of the two variants, finally, remains just as obscure.

b. It was kindly brought to my attention by Professor G.B. Kerferd and Dr. M.G. Sollenberger that these four epithets are similar to those used by Diogenes Laertius 5.36-37: *synetōtatos*, *philoponōtatos*, *energetikos*, *philologos*, and might conceivably derive from him. This, however, seems to be quite impossible at the present state of our knowledge. There is first the major difficulty that Diogenes was not known in the Arabic tradition directly, and we have so far no indications that any Laertian text was transmitted even indirectly. Admittedly very little research has been conducted in this area, but the initial investigations tend to favor the view that Diogenes and the Arabic tradition may ultimately have used the same sources, at least for some of the sayings of the philosophers reported by Diogenes (cf. Gutas *Greek Wisdom* index s.n. Diogenes Laertius, and especially pp. 330-31). Second, paragraph [IIa]2 appears to have been added by Zawzanī (Qiftī) presumably in order to justify and explain the reason why Theophrastus was chosen to succeed such a glorious master. In the Arabic tradition Theophrastus was very little known, whether by name or through his works, outside a very small circle of philosophers, and to the general educated public to which Zawzanī’s (Qiftī’s) book was addressed it may have seemed strange that Aristotle should have been succeeded by a relatively unknown philosopher. It would thus appear that Zawzanī (Qiftī) took the liberty to complement Ibn an-Nadīm’s very brief and inadequate remarks by means of such an elaboration in order to justify and explain the received tradition that Theophrastus was, in fact, Aristotle’s successor. The impression generated by paragraph [IIa]2, that this was indeed Zawzanī’s (Qiftī’s) intention and that he had very little material to work with, is further supported by his repetition, in his own words (see note a above), of the alleged family ties between the two philosophers, and by the general nature of the epithets selected, which lack the specificity of the Greek ones in Diogenes.

c. Paragraph [IIa]3 appears to derive from the *Siwān* tradition, although perhaps not directly, since one would have expected the other material in it also to have been copied by Zawzanī (Qiftī).

d. Bar Hebraeus slightly abbreviates the account of Zawzanī (Qiftī).

[III] Abū Sulaymān as-Sijistānī al-Mantiqī said in his *Scholia* (*Ta’āliq*) that Theophrastus was the executor of Aristotle’s will.^a

Text: IAU 1.57.19-20.

a. The work in question by Abū Sulaymān [d. after 988] is not extant. His brief remark derives from Aristotle’s will in Ptolemy’s *Vita*.

AN ECLECTIC TEXT: MUBAŠŠIR

[IV] 1. Aristotle had many students among kings, princes, and others. The following are some of the most excellent ones among them who were famed for their knowledge, distinguished in philosophy, and known for their noble descent: Theophrastus, Eudemus, Alexander the King, Eudemus [sic], ’shwlws,^a and others.^b

2. After Aristotle, the instruction of the philosophical doctrines which were established^c and classified was undertaken by the son of his maternal aunt,^d Theophrastus, who sat in his [professorial] chair and inherited his position.^e

3. Helping and assisting Theophrastus in this [task] were two men, one of them called Eudemus and the other 'shwlws.^a They all wrote books on logic and philosophy.^f

4. The issue Aristotle left behind was a young son, named Nicomachus, and a young daughter. He [also] left behind much property, many male and female slaves, and other things. He appointed Antipater executor of his will together with a group of his companions in order to help him, and left Theophrastus the option to participate with them, should they deem it convenient, in the disposition and management of the will.^g

Text: Mubaššir 183.6-15 = Lippert *Studien* 8.10-19 = IAU 1.57.4-11 = MS Ahmet III f. 89v, 3-13.

Trans.: Lippert *Studien* 16-17.

a. See note b to text [I]2 above.

b. The proximate source of paragraph 1 is one of the two known Syriac lives of Aristotle (Baumstark *Aristoteles* 124); the ultimate source is the *Vita Marciana* (Düring *Biographical Tradition* paragraphs 44, 46). This Syriac life, which does not derive from Ptolemy's *Vita* as Düring suggests (*Biographical Tradition* 188; see my "Lives of Aristotle," part 1a), was apparently available to Mubaššir in an Arabic translation. To the names mentioned in the Syriac life Mubaššir added the two names he found in the *Šiwān* (text [I]2), which accounts for the double mention of Eudemus. The variation and corruption in the transliteration of the name of Eudemus in the Arabic sources prevented Mubaššir from realizing that the two names were identical.

c. Only the Istanbul manuscript has "established" (*waḍa'ahā*); the other sources indicated below omit the word.

d. See note a to text [II]1 above.

e. Aristotle's reputation as the founder and systematizer of the philosophical disciplines was a commonplace from late Alexandrian times onwards. To this general information Mubaššir adds in paragraph 2 Theophrastus' alleged relation to Aristotle (see note a to text [II]1 above), and his succession as scholar, which he apparently takes from the *Šiwān* ([I]1), if one is to judge from the verbal similarity in their respective texts.

f. Paragraph 3 is abridged from the *Šiwān* ([I]2).

g. Paragraph 4 is a summary, in Mubaššir's words, of Aristotle's will from Ptolemy's *Vita*.

MISCELLANEOUS REPORTS

[V] In our book *Funūn al-ma'ārif* (*Varieties of Knowledge*),^a we discussed at length . . . the dispute whether philosophers like Pythagoras, Thales, Empedocles, the Stoics, the people of the Stoa [sic], Homer, Archelaus, Socrates, Plato, Aristotle, Theophrastus, Themistius, Hippocrates, Galen, and

other philosophers and physicians were Romans [or Byzantines] or Greeks and we adduced testimony from their own books, that they were Greeks. . .

Text: Mas'ūdī *Tanbih* 115 (de Goeje) = 100 (Beirut).

Trans.: Carra de Vaux *Avertissement* 162.

Stern "Mas'ūdī" 31.

F. Jadaane, *L'Influence du Stoicisme sur la pensée musulmane* (Beirut 1968) 58.

a. This work by al-Mas'ūdī is not extant.

[VI] . . . Athens, the city of Aristotle, the son of Nicomachus, and of Theophrastus.

Text: Mas'ūdī *Tanbih* 180 (de Goeje) = 153 (Beirut).

Trans.: Carra de Vaux *Avertissement* 244.

[VII] The Roman Emperor Augustus defeated [Cleopatra] and had her killed. He took over the rule and, when he had secured it, he inspected the libraries [in Alexandria] and found there manuscripts of Aristotle's works written in his lifetime and in that of Theophrastus.

Text: Fārābī, "On the Appearance of Philosophy," *ap.* IAU 2.135.4.

Trans.: Rosenthal *Heritage* 50.

III. THE WORKS OF THEOPHRASTUS IN ARABIC

The *Fihrist* is the only source that contains an original list of the works of Theophrastus. Zawzanī (Qiftī) and Ibn Abī Uṣaybi'a copy from it directly, while Baḥr al-Hebraeus merely reproduces incompletely Zawzanī (Qiftī). The nature and length of the list in the *Fihrist* make it clear that it was compiled by Ibn an-Nadīm himself and not copied from a bibliography of Theophrastus available to him in translation. Although apparently more works of Theophrastus were known in Arabic translation than those listed by Ibn an-Nadīm, their number was nevertheless not great. This reflects the meagre rate of survival of Theophrastus' works in Greek at the time of the rise of Islam. On the other hand, considerable Theophrastean material seems to have been available in Arabic from indirect sources, i.e., from Arabic translations of Greek works which themselves quoted Theophrastus, like the Aristotelian commentaries of Alexander of Aphrodisias and Themistius. Identifying and recovering these texts are still tasks for the future.

In the bibliography below I have added to Ibn an-Nadīm's listings and their repetition in Z and IAU whatever information I could readily locate in other sources (without claiming to have exhausted them), and arranged the titles according to the traditional Aristotelian classification. The equal sign indicates verbatim agreement among F, Z, and IAU; all the instances of disagreement among them have been noted. Works attributed to Theophrastus in the Arabic tradition but which are manifestly spurious have been marked with an asterisk following the number of the title. The entry in the *Fihrist* is translated in Rosenthal's *Heritage* 30, which should be consulted; as in section A, however, no reference has been made to B. Dodge's translation of the *Fihrist*. M. Steinschneider's venerable *Die arabischen Übersetzungen*

aus dem Griechischen (1889-1896, repr. Graz 1960), now superseded, also has not been referred to.

LIST OF WORKS

- [1] *Commentary on the Categories*
F 252.10-11 = Z 107.6 = IAU 1.69.25-26. Following F, all sources mention that this commentary is [wrongly] attributed to Theophrastus. The work is referred to again in F 248.21 = Z 35.5.
- [2] *Commentary on De Interpretatione*
F 249.3 = Z 36.1.
- [2.1] *On Affirmative and Negative Propositions* [= ? *De Interpretatione*]
Fārābī, *Commentary on De Interpretatione* (Kutsch-Marrow 22.7-8) reports that "Theophrastus named the book which he wrote for the same purpose as this book [i.e., Aristotle's *De Interpretatione*] *On Affirmative and Negative Propositions*." (Cf. F.W. Zimmermann, *Al-Fārābī's Commentary and Short Treatise on Aristotle's De Interpretatione* [London 1981] 6, 45, 255.) It would appear that the same book is being referred to by Ibn Buṭlān in the passage cited in section IV below, saying [15], note c. IAU 2.102.18-20 repeats the information from Ibn Buṭlān. Cf. *RE Suppl.* 7 (1940) 1382.20.
- [3] [*Commentary on?*] *Analytica Priora*
In his *Vita Aristotelis* preserved in Arabic (IAU 1.68.22 = Düring *Biographical Tradition* 228, No. 74), Ptolemy has the following entry: "[Aristotle's] *On the Discipline of Defining*, used by Theophrastus for the *Analytica Priora*. One book." It is not clear whether the book referred to was a commentary on Aristotle's work or an independent composition by Theophrastus. For indirectly transmitted Theophrastean texts on this subject see the references in Daiber's article in this volume.
- [4] *Topica*
Arabic sources never refer explicitly to a *Topica* by Theophrastus. Such a work, however, was known in Arabic through its incorporation in the commentary by Themistius, which is mentioned in the *Fihrist* 249.23. Averroes quotes Theophrastus *via* Themistius in his *Middle Commentary on Aristotle's Topics* (ed. Ch. Butterworth, Cairo 1979), paragraphs 51, 56, 128, 242, 244, 291.
- [5] *Meteorologica*, one book
F 252.7-8 = Z 107.3 = IAU 1.69.24. See *GAS* 7.216-23; cf. *GAS* 4.42, no. 9, and *GAS* 7.283 and 284 no. 1.
- [6] *De Anima*, one book
F 252.7 = IAU 1.69.23-24. The tenth-century scholar Qusṭā b. Lūqā says that he used the work of Theophrastus for his *On the Difference between the Spirit and the Soul*. See H.Z. Ülken, *Ibn Sina Risāleleri*, vol. 2 (Istanbul 1953) 83. The name of Theophrastus is missing in the defective manuscript upon which the edition of Qusṭā's work by G. Gabrieli is based: "La Risāla di Qusṭā b. Lūqā 'Sulla differenza tra lo spirito e l'anima,'" *Rendiconti della Reale Accademia dei Lincei*, Cl. Sc. Mor. Stor. Fil., Series 5, vol. 19 (Rome 1910) 627; but cf. p. 625.

- [7] *De Sensu et Sensato*, four books
F 252.8 = Z 107.5 note that the work was translated by Ibrāhīm b. Bakkūš.
IAU 1.69.24-25 omits the translator.
- [8] *De Causis Plantarum*
F 252.9-10 provides the following information: "Translated by Ibrāhīm b. Bakkūš. Only a commentary on some portions of the first book is extant."
Z 107.5-6 omits the last sentence, while IAU 1.69.25 has only "*De Causis Plantarum*. A commentary." See Ullmann *Geheimwissenschaften* 73-74, GAS 4.313.
- [9] *Problemata*
F 265.10 = Z 164.18 add "Translated by Ibn al-Ḥammār from the Syriac."
IAU 1.69.26 has only "*Problemata Physica*." Cf. GAS 7.223, no. 2.
- [10] *Metaphysics*, one book
F 252.9 = Z 107.4 report that it was translated by Yahyā b. 'Adī, while IAU 1.69.25 omits the translator. See G. Endress, *The Works of Yahyā b. 'Adī* (Wiesbaden 1977) 28.
- [11] *On Education*, one book
F 252.8 = Z 107.3-4 = IAU 1.69.24. See Fortenbaugh S9; but cf. A. Baumstark, *Geschichte der syrischen Literatur* (Bonn 1922) 231, n. 10, who suggests either the *Characters* or the *Ethics* for this work.
- [12*] *On Asserting the Oneness [of God] to Democritus* [?'Dmqr'ṭ]
IAU 1.69.26. This work, mentioned only by Ibn Abī Uṣaybi'a, is apparently spurious. Judging from the mention of the name of Democritus in the title, I would guess it to have been of alchemistical content. See further the article of Daiber in this volume.
- [13*] *De Lapidibus*
This work is also spurious and not the original of the same title by Theophrastus. See Ullmann *Geheimwissenschaften* 111-2.

MISCELLANEOUS REPORTS ON THEOPHRASTUS'
LITERARY AND PHILOSOPHICAL ACTIVITY

[I] I found on the flyleaf of a volume^a written in an old hand the names that have reached us of the commentators on the logical and other philosophical books by Aristotle. They are Theophrastus. . . .

Text: F 255.13-16.

a. For the codicological details see F. Rosenthal, *The Technique and Approach of Muslim Scholarship* (Rome 1947) 20b.

[II] We mentioned in the book *Varieties of Knowledge* the reason why political philosophy began with Socrates and then [continued with] Plato, then Aristotle, then his maternal aunt's son, Theophrastus, then Eudemus, and those who came after him, one after the other.

Text: Mas'ūdī *Tanbih* 121 (de Goeje) = 105 (Beirut 1968).

Trans.: Stern "Mas'ūdī" 39-40.

Carra de Vaux *Avertissement* 170.

IV. SAYINGS OF THEOPHRASTUS IN ARABIC

The greatest number of sayings attributed to Theophrastus in Arabic are found in the *Šiwān al-ḥikma* (nos. 1-22); Mubaššir comes second with five sayings (nos. 23-27); other sayings are located individually (nos. 28-29; see the Concordance at the end of this essay). Although I believe that the sayings of Theophrastus collected in this section represent the majority of all those available in Arabic, it is not at all unlikely that as research on the Arabic gnomologia continues and they are studied in their entirety, other sayings from sources yet untapped will be recovered and sayings attributed to other authors in the known collections will be reclaimed for Theophrastus.

The entry on Theophrastus in the original *Šiwān* is reconstructed by combining the testimony of three witnesses drawing from it: the two later recensions, *Muntaḥab* and *Muḥtaṣar*, and Šahrastānī. (Šahrastānī has no sayings which are not also contained in the *Muntaḥab* and this suggests that he may have used only the latter recension and not the original *Šiwān*.) There are no overlapping sayings in the *Muntaḥab* and *Muḥtaṣar* recensions, but fortunately Šahrastānī includes sayings that overlap with both, enabling us to reconstruct with tolerable certainty the order of the sayings in the original *Šiwān*. This is the order in which the sayings are presented in this section.¹³

The contents of the reconstructed entry on Theophrastus in the *Šiwān* indicate that the compiler was working with more than one source. Saying [9*] is attributed to Theocritus in all the other Arabic sources (see Concordance). The misattribution to Theophrastus in the *Šiwān* could have taken place only in the Arabic transmission, on account of the similar spelling of the two names; it could not have occurred in the original source of the *Šiwān* which contained the authentic sayings. The same is true of saying [11*], which entered the Arabic tradition through the translation of Paul's treatise on music and was eventually attributed to Theophrastus in the course of the transmission within Arabic (see Appendix A). The compiler of the *Šiwān* was thus drawing upon at least one source containing sayings translated from a Greek original which ascribed them to Theophrastus, and attempted to complement this source by incorporating from other collections sayings that were misattributed to Theophrastus in the Arabic tradition. In the case of sayings [9*] and [11*] (and possibly also of [7*]), we are able to identify the misattribution because of the additional information about them available in both Greek and Arabic; for those sayings for which no known counterpart exists in either Greek or Arabic, the question of their authenticity cannot be determined on similar formal grounds. Their contents could naturally provide a clue, but this approach in the case of sayings which are discrete pronouncements without a context is extremely uncertain and could be misleading. All due caution is therefore recommended.

The reconstructed entry in the *Šiwān* displays a distinct structure: it starts appropriately with a saying on god, ends with the saying of Theophrastus on his deathbed, while the sayings in between are clustered for the most part on a thematic basis, indicated in the Concordance below. One each of the two sayings on the soul (3, 4) and on the shortness of life (21, 22) has distinct affinities with the Theophrastean source used by Cicero in the *Tusculan Disputations* and is almost certainly authentic; if this is any indication, it might be assumed as a working hypothesis that the remaining clusters also reflect original Theophrastean ideas. The authenticity of the sayings in the *Šiwān* cannot at present be established beyond these general observations.

The sayings attributed to Theophrastus in Mubaššir's collection (nos. 23-27) are found in a chapter entitled "Sayings by a Number of Philosophers Known by Name, for None of Whom Enough Sayings are Recorded to Make a Special Chapter Possible." It is thus clear that Mubaššir culled them from various sources, which cannot at present be specified with greater precision. The authenticity of those without any known Greek parallels remains questionable.

As mentioned in Section I, all the information on Theophrastus in the *Šiwān* and Mubaššir is transmitted indirectly. Saying [28] constitutes the only text included in this article which is in all likelihood transmitted directly. It is found in the Arabic translation of Paul's treatise "The Element of Music," which appears, *prima facie*, not to have undergone any editorial alteration within the Arabic tradition. It can be reasonably assumed to reflect, to the extent that the translation is accurate, the original Syriac or Greek text from which it is translated. The possibility of misattribution in the Syriac or Greek tradition is a different issue.

Finally, saying [29] is found in a gnomological potpourri, the famous MS Istanbul Köprülü 1608. The attribution to Theophrastus is quite beyond verification at this stage.

An asterisk following the number of a saying indicates that the saying in question is demonstrably misattributed to Theophrastus. In the references to the texts, the number after the abbreviated name of Theophrastus (Th.) indicates the order of the saying in the entry in that particular work.

FROM THE ŠIWĀN AL-ḤIKMA

[1] Divinity is not in motion.

Comments in the <i>Šiwān</i>	Comments by Šahrastānī	Comments by Šahrastūrī
[1.1] Among the sayings reported from him that are appropriate to mention here is the following: "Divinity is not in motion." Whoever ponders this statement and reflects upon how laconic, and yet how full of meaning and rich in yield it is, will get an understanding from it of his knowledge, his profundity, and the august position he holds in the [philosophical] sciences.	[1.2] Among the sayings reported from him is the following: "Divinity is not in motion."	[1.3] What indicates his excellence and [intellectual] might is the following saying: "Divinity is not in motion." Despite its laconism, this [statement] is full of meaning and rich in benefit.

It means that divinity
neither changes nor al-
ters, either in its es-
sence or in its "acts."^a

Text: *Muntaḥab* 1175-1177, Th. 1.
Šahraṣṭānī 337.17-18, Th. 1.
Šahrazūrī f. 80v, 14-15, Th. 1 (see Appendix B).
Trans. of Šahraṣṭānī: Haarbrücker 2.197.35-198.2.
Altheim 3.132, no. 1 = Altheim-Stiehl 14b.
Comm.: Moraux in Altheim 3.132.
Gigon in Altheim 5.95.

a. "Acts": *fī šibhi l-af'āl*. There is considerable disagreement in the editions of Šahraṣṭānī concerning the word *šibh* (*sunna* K; *ṣifāt* Q; *šibh* C, Y), although it would seem to be correct: *šibh al-af'āl* = quasi acts, i.e., what appear, by comparison to other agents, as acts, and hence implying a change in the agent. In my translation I have let the quotation marks do the work of the word *šibh* (quasi). Haarbrücker says: "in den entsprechenden Handlungen"; Altheim "in der Idee [?] der Handlungen" Altheim-Stiehl "in the idea of the actions."

] When he was told that control of anger is difficult, he said, "Control of desire is also difficult; this is because nothing that is good is easy."

Text: *Muntaḥab* 1177-1178, Th. 2.

] He said: The soul is able to fly and alight on everything it wishes with the hidden wings it has, observing whatever it wishes^a without being itself observed. It resembles a bee, which flies and descends upon a tree filled with the honey of fruits: it takes of it what it needs, appropriating what is sweet it has, and leaves the roots^b themselves devoid of their former sweetness, acquiring their best parts.

Text: *Muntaḥab* 1178-1181, Th. 3.
Šahrazūrī f. 81r, 1-2, Th. 2.

a. The text of Šahrazūrī ends here.
b. "Roots": *'aqāqir*. Cf. Ullmann *Medizin* 290, notes 4 and 5, and his references Meyerhof.

] When the soul casts off the weight of worldly thoughts which hinder^a its movements toward the excellent object,^b it takes up philosophy with the least amount of trouble and effort and becomes like a lamp both luminous in itself and illuminating others. When an ignorant person adheres to [philosophy] he becomes learned, and when a poor person follows it he becomes rich; and the higher [the soul] rises the more it increases in knowledge and the person meets with abundant wealth.^c

Text: *Muntahab* 1182-1185, Th. 4.
 Šahrazūrī f. 81r, 2-6, Th. 3.

a. A variant reading in Šahrazūrī and two manuscripts of the *Muntahab*, adopted by Dunlop, has: "the weight of thinking about this world, which hinders. . . ."

b. For the entire saying, cf. Cicero, *Tusc. Disp.* 1.44 = Fortenbaugh L45. If the context of the saying is indeed the passage attributed to Theophrastus by Cicero, then the "excellent object" here would refer to heaven.

c. Šahrazūrī omits the last sentence beginning with, "and the higher. . . ."

[5]

Šiwān

[5.1] He used to say: Heaven is the abode of all stars; as for earth, it is the abode of all humans, because the latter are the image and likeness of the former: the stars are the parents and our managers. (This is because the stars have rational souls and intellects but no vegetative souls, because they are not subject to growth and diminution.)^a

Šahrastānī

[5.2] He said: Heaven is the abode of stars and earth is the abode of humans insofar as the latter are the image and likeness of what is in heaven. Humans are the parents and managers and have rational souls and intellects, while the stars have no vegetative souls and are therefore not subject to growth and diminution.^b

Text: *Muntahab* 1186-1188, Th. 5.
 Šahrastānī 337.18-20, Th. 2.

Trans.: Haarbrücker 2.198.2-8.

Altheim 3.132, no. 2 = Altheim-Stiehl 14b.

Comm.: Moraux in Altheim 3.132.
 Gigon in Altheim 5.95.

a. The parenthetical sentence appears not to be part of the original saying. Its function is to explain, in terms of astral theology, why the ethereal stars, our "parents and managers," dwell in heaven while we dwell on sublunar earth, the realm of generation and corruption. It was in all likelihood added by a person other than the translator, possibly by the compiler of the *Šiwān* himself. This is indicated by the fact that in the original first part of the saying, the stars are referred to by the third masculine plural pronoun (*hum*), which lends them, very appropriately in the context of the saying itself, a hypostatic and anthropomorphic dimension. (See note b below, where the pronouns are indicated. It is impossible to say whether the Arabic translator had in mind a similar hypostatization of the stars in a Qur'anic passage, *Sūrat Yūsuf* 12.4: *ra'aytuhum* [scil. *al-kawākib*] *lī sājidīna*.) In the parenthetical passage on the other hand, the stars are referred to by the third feminine singular pronoun (*-hā*), normally reserved for nonhuman objects. Unless one assumes textual corruption in the process of transmission, which seems unlikely in the present case, the change of pronouns cannot be imputed to a single author, and the parenthetical sentence is thus a later addition. (Altheim 3.132 n. 16 = Altheim-Stiehl 18 n. 115 also noted the discrepancy but did not account for it.)

b. Šahrastānī had doctrinal problems with the passage as he found it in the original *Šiwān*. Specifically he found unacceptable, from the point of view of a Muslim

theologian, the statements that humans are the image and likeness of stars and that the stars are the parents and managers of humans; accordingly, he made the changes indicated in the translation above. By exploiting the ambiguities of the text furnished by the shift in pronouns he was able to effect his alteration with a minimal revision of the transmitted wording. This provides us with a good illustration of his compositional technique, which can be best demonstrated by a comparison of literal translations of the two versions:

Šiwān

He used to say: In heaven is the abode of all stars, and as for earth, on it is the abode of all humans, because they [-*hum*: humans] are the image and likeness of them [-*hum*: stars]: they [*hum*: stars] are the parents and they [*hum*: stars] are our managers. (This is because they [-*hā*: stars] have rational souls and intellects but they [-*hā*: stars] have no vegetative souls because they [-*hā*: stars] are not subject to growth and diminution.)

Šahrastānī

He said: Heaven is the abode of stars and earth is the abode of humans insofar as they [-*hum*: humans] are the image and likeness of what is in heaven. They [*hum*: humans] are the parents and managers and they [-*hum*: humans] have rational souls and intellects, while they [-*hā*: stars] have no vegetative souls and are therefore not subject to growth and diminution.

[6] He said: It is not wealth that is good, but how wealth is good.^a

Text: *Muntahab* 1188 Th. 6.

a. Cf. Scholion in Platonis Leges 631C, pp. 303-304 Greene = Fortenbaugh L70. It is perhaps to be added, in the Arabic version, "but how wealth is [made to be? acquired/used that is?] good <is what is good>" (*kayfa l-ḡinā ḥasanun <huwa ḥasanu>*). Because of the laconism in the Arabic (presumably reflecting the Greek, perhaps *ouk ho ploutos agathon alla pōs agathon <agathon>[?]*), the reading is relatively uncertain; the meaning, however, is clear and parallels the Platonic scholion. Cf. further Plutarch *Lycurgus* 10.2 and *De cupid. div.* 527B = Fortenbaugh L74: *aploutos ho ploutos*.

[7*] He saw a wrestler who, unable to throw anybody down, abandoned wrestling and became a doctor. He said to him, "Now you can throw down whomever you wish."^a

Text: *Muntahab* 1188-1189, Th. 7.

a. This saying is reported under the names of Demosthenes and Diogenes in the Greek tradition (*Gnomologium Vaticanum* 226 and Diogenes Laertius 6.62, respectively). At this stage it is difficult to specify where the (mis-?) attribution to Theophrastus occurred.

[8] *Šiwān*

Mubaššir

[8.1] Alexander asked him,
 “What makes a king’s rule good?” He
 said, “When the subjects obey their
 king and the king acts according to
 tradition and justice.”

[8.2] Alexander asked Theophrastus,
 “What makes a king’s rule good?” He
 said, “The obedience of the subjects
 and the justice of the king.”^a

Text: [8.1] *Muntaḥab* 1189-1190, Th. 8.

[8.2] Mubaššir 248.17-18.

a. It would seem that Mubaššir’s version, which is reported among the sayings of Alexander, is an adaptation of the Arabic text as reflected in the *Šiwān* and does not derive from an independent translation of a variant Greek saying.

[9*] Observing a teacher with bad handwriting teaching^a how to write, he^b said to him, “Why don’t you teach wrestling?” The man replied, “Because I’m not good at it.” “Well,” he said, “here you are teaching how to write and you’re not good at it either!”

Text: *Muntaḥab* 1190-1192, Th. 9.

Rosenthal “Ibn Durayd” no. 44, Theocritus.

Ibn Hindū 127-128, Theocritus.

Mubaššir 301.7-8, Theocritus.

Trans.: Rosenthal “Ibn Durayd” no. 44.

(Mubaššir) Rosenthal *Heritage* 128, no. 40.

a. Ibn Hindū has “teaching children,” which may be the original reading.

b. Except for the *Muntaḥab*, all the other Arabic sources (and Stobaeus 3.4.68 in the Greek) attribute the saying to Theocritus. The misattribution is due to the compiler of the original *Šiwān* through a misreading of Theocritus for Theophrastus, which look alike in Arabic spelling.

[10] Upon being asked, “Who are your friends?” he said, “How would I know? I am rich” (i.e., I have lots of money and hence no friends).^a

Text: *Muntaḥab* 1192-1193, Th. 10.

a. The interpretation in parentheses is apparently by the translator from the Greek (but cf. note a to saying [5] above) or the compiler of the original *Šiwān*. Another possible interpretation would be, “Since I am rich, I cannot distinguish between my true friends and those who befriend me for my money.”

[11*] Singing [*ḡinā*’] is a virtue of speech obscure to the soul; the soul is incapable of stating the innermost essence of [this virtue] clearly [in words], and so it expresses it in melodies.

([This virtue] stirs in [the soul] heartaches,

and trials and tribulations^a lie hidden^b within it.)^c

Text: Šahrastānī 337.20-338.2, Th. 3.

Trans.: Haarbrücker 2.198.8-14.

Altheim 3.133, no. 3 = Altheim-Stiehl 15a.

Comm.: Moraux in Altheim 3.133 = Altheim-Stiehl 15a.

Gigon in Altheim 5.95.

a. Reading *futūnan*, Šahrastānī (K), (Q), for *funūnan* (C).

b. Reading *aḍmarat*, Šahrastānī (K), (Q), (Y), for the manifestly corrupt *aṣamma* (C).

c. This saying has had a long career in Arabic literature and underwent numerous transformations; see the parallel texts in Appendix A. It is evident from these texts that the attribution to Theophrastus occurred in the course of the transmission in Arabic, and is thus to be rejected. The last sentence in parentheses is likewise a later addition. This is indicated by its content, which does not follow any other version, and by its form. It is written in rhyming prose that also rhymes with the last word of the original saying (*luḥūnan-ṣujūnan-funūnan wa-futūnan*), and ends with a Qur'ānic word (*futūnan*; *Sūrat Ṭā' Hā'* 20.40). The addition is apparently intended to denigrate singing.

[12] Music [*ḡinā'*] is something proper exclusively to the soul, not the body, and it distracts the soul from attending to its welfare,^a just as the pleasure of food and drink is something proper exclusively to the body, not the soul.^b

Text: Šahrastānī 338.2-4, Th. 4.

Trans.: Haarbrücker 2.198.14-19.

Altheim 3.133, no. 4 = Altheim-Stiehl 15a.

Comm.: Moraux in Altheim 3.134 = Altheim-Stiehl 15b.

a. Cf. Plutarch, *Quaest. Conv.* 7.5, on pleasures arising from bad music.

b. Cf. in general Plutarch, *Quaest. Conv.* 5, prooemium.

[13] Had any degree of virtue been associated with listening [to music], deer^a would have acquired thereby a share of it, since they are very fond of the sounds of musical instruments.^b

Text: *Muntaḥab* 1193-1194, Th. 11.

a. Reading *al-ayā'ilu* (pl. of *iyyal*) with Badawī, for *al-abā'ilu* in Dunlop and codd.

b. It is commonplace in Greek literature on musical *ēthos* that animals are susceptible to music; deer and dolphins are frequently cited as examples. For the above saying in particular cf. Plutarch *Quaest. Conv.* 7.5, 704F.

[14] Souls are more attentive to melodies^a when they are concealed than to that which is manifest and whose meaning is apparent to them.

Text: Šahrastānī 338.4-5, Th. 5.

Trans.: Haarbrücker 2.198.19-22.

Altheim 3.134, no. 5 = Altheim-Stiehl 15b.

Comm.: Moraux in Altheim 3.134 = Altheim-Stiehl 15b.

a. "Melodies:" *luḥūn*. M. Ullmann (*Wörterbuch der Klassischen Arabischen Sprache*, Wiesbaden 1983, 2,1, p. 381b35) lists this saying under the definition of *lahn* as "manner of speaking, intonation, speech, dialect." I favor "melodies," perhaps "rhythms," because the saying is found in the company of other sayings on musical *ēthos*.

[15] Intellection^a is of two kinds: one is innate and the other through listening.^b The innate is like the earth, and the one through listening is like the seed and water: innate intellection does not proceed by itself unless intellection through listening comes to it to rouse it from its sleep, free it from its fetters, and stir it from its place, just as seed and water bring out what lies in the depths of the earth.^c

Text: Šahrastānī 338.5-8, Th. 6.

Trans.: Haarbrücker 2.198.22-32.

a. 'Aql can mean either "intellect" (*nous*), the faculty, or "intellection" (*noēsis*), its act. Given the ambiguity of this passage (see note c below), "intellection" seems to fit better in the context.

b. "Through listening": *masmū'*, i.e. "heard"; "geoffenbarte," Haarbrücker.

c. The two kinds of intellection referred to in this passage would appear to reflect a Greek original (assuming there was a Greek original for this saying) containing the Stoic formulation of *logos endiathetos* and *prophorikos*, although the association of this concept with Theophrastus, if this passage is indeed by Theophrastus, remains problematic (but see below the passage by Ibn Buṭlān, who seems to distinguish among three kinds of *logos*: *endiathetos*, *prophorikos*, and *graptos*). Even more problematic, however, would be to assume a reference to the passive and active intellect in the Aristotelian sense, as Daiber is inclined to think elsewhere in this volume (section III of his article), for I know of no passage in Arabic where the passive and active intellects are called *maṭbū'* (imprinted, innate) and *masmū'* (heard). If I were to hazard a guess, I would suggest that this passage argues in favor of oral instruction, as expounded by Ibn Buṭlān in refutation of Ibn Riḍwān (J. Schacht and M. Meyerhof, *The Medico-Philosophical Controversy between Ibn Butlan of Baghdad and Ibn Ridwan of Cairo* [Cairo 1937] 83-85; translation adopted with modifications):

On the Causes why He who Learns from Oral Instruction by Teachers Learns Better and more Easily than He who Learns from Books, Given that the Receptive Faculty of Both of them be the Same. We will forward a number of reasons for this opinion. . . .

The substrate of knowledge is words [i.e., linguistic units, *lafẓ*], and words are of three kinds: proximate to the intellect, i.e., that which the intellect forms as a symbol [*mitālan*] for the concepts which exist in it; intermediate, i.e., that which is pronounced by the voice, and that is a symbol for the things formed by the intellect; and remote, i.e., that which is deposited in books, and that is a symbol for that which is enunciated in speech. . . . The first symbol of the word which exists in the intellect is closer with regard to understanding than the symbol of the symbol; the first symbol is the enunciated word, and the second symbol is the written [word]. As this is so, understanding from the word

of the teacher is easier and closer than that from the words of the book. . . .

[Another argument is] that which the commentators have said about the substitution of the simple negative [proposition] by the modified [/equivalent] affirmative [proposition]; for they agree that this section would have never been understood by a reading of the book, had not Aristotle's disciples, Theophrastus and Eudemus, heard it explained by their master. If this is so, the understanding from the teacher is better than that from the book.

It would appear from these passages that the Greek commentators on *De Interpretatione* (see above, section III, work no. [2.1]) talked about the virtues of oral instruction presumably on the basis of some statements made by Theophrastus (and Eudemus?) himself. If this is so, it would be natural to understand saying [15] in this context.

[16] He was asked whether wealth or wisdom/philosophy were worthier of pursuit.^a He said: Wisdom/philosophy is the wealth of the soul while property is the wealth of the body. Pursuit of the wealth of the soul is worthier because when the soul becomes enriched, it survives (while when the body becomes enriched, it perishes);^b also, wealth of the soul is extensive, while wealth of the body is limited.

Text: *Muntaḥab* 1194-1196, Th. 12.

Šahrastānī 338.8-10, Th. 7.

Šahrazūrī f. 81r, 6-8, Th. 4.

Trans.: Haarbrücker 2.198.32-199.1.

Comm.: Fortenbaugh 241-42, on L71.

a. Šahrastānī and Šahrazūrī omit the first sentence.

b. The phrase in parentheses is omitted in all the manuscripts of the *Šiwān* and by Šahrazūrī. In all likelihood it is an addition in the Arabic transmission of the saying designed to preserve the parallelism in the structure of the sentence.

[17] You shall feel no self-satisfaction^a in rule without justice, wealth without prudent management, eloquence without truth in speech, misplaced generosity,^b education without sound^c judgment, and beneficence without proper consideration [of circumstances].^d

Text: *Muḥṭaṣar* f. 33v, 8-10, Th. 1.

Šahrastānī 338.12-14, Th. 9.

Trans.: Haarbrücker 2.199.4-10.

Comm.: Fortenbaugh 188-90, on L25.

a. The Arabic verb, *īṭabāṭa* (following the *Muḥṭaṣar* reading), implies self-satisfaction because envied by others.

b. Cf. Fortenbaugh L13.

c. Reading *aṣāla*, as in *Muḥṭaṣar* and Šahrastānī (K), for *iṣāba* in Šahrastānī (C), (Q).

d. Reading *ḥisba*, with *Muḥṭaṣar*. The editions of Šahrastānī have *ḥasana* (C), *ḥinihi* (K), *ḥaṣya* (Q).

[18] An intelligent person ought to deal with time as gently as a non-swimmer who has fallen in a flowing stream deals [with the water].

Text: *Muḥtaṣar* f. 33v, 11-12, Th. 2.

Šahrastānī 338.10-11, Th. 8.

Trans.: Haarbrücker 2.199.1-4.

Comm.: Fortenbaugh 236-37, on L66.

[19] The perfect man is he whom wealth does not render insolent or indigence humble, who is not crushed by misfortunes and yet not immune to calamities, and who does not forget the End and is not deceived by youth: he thus wastes no time as long as he still has days left, his path is safe, has succour, his bridle is slackened, the place he steps on is wide, his reach is extensive, and his physical faculties are compliant, prompt to execute his bidding.

Text: *Muḥtaṣar* f. 33v, 12-15, Th. 3 (see Appendix B).

[20] The eloquent person is he who does not mix lies with truth, the generous he who does not restrict his gifts to the rich, and the pious he whom distress and comfort do not cause to abandon his piety.^a (An obstacle to rectitude when in distress provides a better excuse than an obstacle to virtue when in comfort.)^b

Text: *Muḥtaṣar* f. 33v, 15 - 34r, 3, Th. 4 (see Appendix B).

a. Cf. Stobaeus, *Anthol.* 3.3.42 = Fortenbaugh L84.

b. The parenthetical explanation would seem to imply that a person in the lap of luxury has no excuse for not being pious and virtuous, whereas similar lapses by a person in distress may be regarded with greater indulgence.

[21] Men did not attain what they wished, what they left behind is beyond their reach, and they perished.^a

Text: *Muḥtaṣar* f. 34 r, 3-4, Th. 5 (see Appendix B).

a. Cf. cod. Neapolitanus II D 22 (sent. 19 p. 171 Sbordone) = Fortenbaugh L39.

[22] *Šiwān*

Cicero

On his deathbed Theophrastus set to reproaching nature. He said: How did you manage to fashion cranes, crows,^a and eagles with a constitution capable of longevity, while man you fashioned with a constitution capable of a short

Theophrastus autem moriens accusasse naturam dicitur,

quod cervis et cornicibus

vitam diuturnam(*),

hominibus (***) tam

exiguam vitam dedisset.

life, with the result that
those who need to live
waste away quickly, while
those who do not need to
live last a long time?^b

(** quorum maxime inter-
fuisset)

(* quorum id nihil inter-
esset)^c

Text: *Muntaḥab* 1196-1199, Th. 13.

Šahrazūrī f. 81r, 8-10, Th. 5 (see Appendix B).

a. I read *ḡarābīn* (pl. pl. of *ḡurāb*) for *ḡarānīb* (?) in *Muntaḥab* codd. and Dunlop, and *ḡarābīb* (?) in Badawī.

b. Šahrazūrī summarizes the entire saying as follows: “The constitution of the body has no foundation, but rather the constitution of the soul and its care [is what is important].” Questioning the wisdom of nature—and hence, ultimately, of God—in allotting terms of life is offensive to Muslim sensibilities, which explains Šahrazūrī’s interpretive formulation.

c. The almost identical accounts in Cicero, *Tusc. Disp.* 3.69 (= Fortenbaugh L68) and in the *Šiwān* indicate that both are translating the same Greek text, even if the animals listed are slightly different.

FROM MUBAŠŠIR’S CHAPTER, “SAYINGS BY A NUMBER
OF PHILOSOPHERS KNOWN BY NAME, FOR NONE OF WHOM ENOUGH
SAYINGS ARE RECORDED TO MAKE A SPECIAL CHAPTER POSSIBLE”

[23] Theophrastus said: The educated person is he who reports the good qualities of people and hides the evil.

Text: Mubaššir 301.5.

Trans.: Rosenthal *Heritage* 128, no. 38.

Comm.: Fortenbaugh 179-80, on L17.

[24] Theophrastus said: Intelligent tax collectors manage to collect more by mild methods than they would manage to collect by harsh and violent ones, just as the leech gets more blood without causing pain or making a sound than the mosquito with its sharp sting and awful noise.

Text: Mubaššir 312.7-9.

Trans.: Rosenthal *Heritage* 136, no. 100.

Comm.: Fortenbaugh 244, on L73.

[25] Mubaššir

Šiwān

[25.1] Theophrastus
saw a young man
being silent for a long time and said
to him: “If your silence is due to
your little education, then you are
an educated person; but if you have
received education, then you are

[25.2] Theophrastus the Peripat-
etic saw a young man in an assembly
being silent for a long time and said
to him: “If your silence is due to
your bad education, then you are
an intelligent person; but if it is due
to knowledge and education, then you

ill-educated since you keep silent.^a . . . are acting badly since you keep silent.

Text: Mubaššir 315.2-3.

Muntahab 2069-2071.

Trans.: Rosenthal *Heritage* 138-39, no. 118.

Comm.: Fortenbaugh 331-32, on L138.

a. Although there cannot be any certainty, given the close verbal congruence between the two versions, the differences are nevertheless pronounced enough to suggest that Mubaššir's version derives from a Greek original reflecting the saying as cited by Diogenes Laertius (5.40), while the version in the *Šiwān* derives from the Greek variant found in the *Gnomologium Vaticanum* 333 (Sternbach). See the Greek texts cited by Fortenbaugh.

[26] He also said: When you are enemies with someone, do not be enemies with his entire family, but befriend some of them, for this is something that will curb his [potential] harm.

Text: Mubaššir 315.4-5.

Trans.: Rosenthal *Heritage* 139, no. 119.

Comm.: Fortenbaugh 296-97, on L104.

[27] He said: Sometimes there is need to resort to evil people for mutual benefit, just as the sandalwood tree and snakes benefit each other: the snakes profit from the fragrance and coolness of the tree and protect it from being felled.

Text: Mubaššir 315.6-8.

Trans.: Rosenthal *Heritage* 139, no. 120.

Comm.: Fortenbaugh 297-99, on L105.

SAYINGS FROM VARIOUS SOURCES

[28] Theophrastus said that when Plato sat down to drink he would say to the musician: sing to us of three things: of the First Good, of the second[ary] coming into being, and of the manifestation of things.^a

Text: Paul, "The Element of Music," 124v, 13-15 (see Appendix B).

Trans.: Rosenthal "Music" 264a.

Comm.: Rosenthal "Music" 263-64.

a. "Of the manifestation of things": *fi idāḥ al-umūr*, literally, "rendering things manifest," meaning, apparently, manifest to our senses. If the Arabic saying can be assumed to reflect a Greek text, then the original referents in the latter were in all likelihood the three levels of being according to a vulgar Platonism: the proverbial "tableness," (i.e., the idea of a table: "the First Good"), an actual table ("the secondary coming into being"), and our perception of a table ("the manifestation of things"). Alternatively, *idāḥ al-umūr* could mean "making things clear," i.e., explaining the phenomena, which might lend itself to a similar interpretation. However, a Muslim reader of the saying in Arabic would have understood it as follows: ". . . three things: of the First Good [i.e., God], of the second creation [i.e., resurrection of the body], and of explaining things." The expression "the second creation" (*an-naṣ'a*

aṭ-tāniya) is inspired by the Qur'ānic: "the other or last creation" (*an-naš'a al-uḥrā, al-āḥira* 53.47, 29.20), and was subsequently used to refer to the raising of the dead on the Day of Judgment; cf., e.g., Ibn Sīnā, *Aḥwāl an-naḥs*, ed. by A.F. Al-Ahwānī (Cairo 1952) 45.6; F. Lucchetta, *Avicenna, Epistola sulla vita futura* (Padova 1969) xx, note 5.

[29] Theophrastus^a said: A small deed in recompense for good and evil [done] is more [weighty] than a lot of talk because talk is an accident that perishes while a deed is a substance that endures.

Text: MS Istanbul Köprülü 1608, f. 36r, 3-5 (see Appendix B).

a. The reading of the name is doubtful. The Arabic has y'wfrṭys, which, if at all reflecting the original transliteration of the name, may also be read as Theocritus (cf. note b to saying [9] above). It seems, however, as Professor Fortenbaugh kindly informs me, that Theophrastus assigned great importance to proper recompense for good and evil. See Stobaeus, *Anthol.* 4.1.72 = Fortenbaugh L79.

CONCORDANCE OF THE SAYINGS OF THEOPHRASTUS

Subject	No.	Šiwān al-ḥikma				Mb	ID	IH	Other	Greek/Latin	For tenbaugh
		Mhb	Ss	Msr	Sz						
First mover	1	1	1		1						
Affects	2	2									
On the soul	3	3			2						
	4	4			3						
Astral theology	5	5									
Wealth	6	6	2							Cicero: Tusc. Disp.	
Ruler/Alexander	7*	7								7* { DL: Diogenes GV: Demosth.	
	8	8								Stob.: Theocritus	
Wealth	9*	9				Alex. Vita Theocritus	Theocritus	Theocritus			
	10	10									
Musical ēthos	11*		3								
	12		4								
	13	11									
	14		5								
Intellection	15		6								
	16	12	7		4						L71 L25 L66
Wealth/wisdom	17			1							
Virtuous, intelligent, perfect man	18		8	2							
	19			3							
	20			4							
	21			5							
Shortness of life	22	13			5						
Paideia	23					38				Cicero: Tusc. Disp.	L68 L17 cf. L73
The mean	24					100					
Paideia	25	Th.				118				GV, DL: Th.	L138 L104 L105
The mean	26					119					
Musical ēthos	27					120					
	28								Paul K8pr011 MS		
Actions	29										

LEGEND: Mhb: Muntahab Ss: Šahraštānī Msr: Muhtašar Sz: Šahrazūri Mb: Mubaššir ID: Ibn Durayd
IH: Ibn Hindū DL: Diogenes Laertius GV: Gnomologium Vaticanum Th.: Theophrastus

* Asterisks indicate demonstrable misattributions to Theophrastus.

APPENDIX A: THE TRANSMISSION OF SAYING [11]

This saying is first encountered in Arabic in the translation of the treatise “The Element of Music,” by a certain Paul, which survives in a unique manuscript (see Rosenthal “Music”). It is attributed there to an anonymous philosopher as the answer to a question posed by a person whose name in Arabic transliteration could conceivably be that of Theophrastus, although Rosenthal suggests, with greater plausibility, *prōtos* (i.e., the “first” philosopher to ask a question in the text). It reappears in popularized form and divested of the technical vocabulary of the musical *ēthos* theory in Ḥunayn b. Isḥāq’s famous *Nawādir al-falāsifa* (*The Anecdotes of the Philosophers*), where it exists in two versions, both anonymous. The relation among these three versions, the one in Paul and the other two in Ḥunayn, cannot be established with certainty; it would seem, however, that the versions in Ḥunayn are modifications, at some unspecified remove, of the original saying in the Arabic translation of Paul. Alternatively it might be possible to argue, although Rosenthal is inclined to discount this, that the modifications occurred already in the Greek tradition, and that the three Arabic versions reflect three distinct translations of these. A final decision cannot be made at this stage.

The remaining versions given below, which by no means exhaust all the variant forms of the saying extant in Arabic sources, derive from Ḥunayn and are adapted by the various Arabic authors who incorporated them in their works. Nos. II.1 through II.4 are apparently paraphrases of the first version in Ḥunayn, while III.1 is a paraphrase of the second, presumably adopted by the compiler of the *Ṣiwān* and thence by Šahrastānī. The misattribution to Theophrastus, either by the compiler of the *Ṣiwān* or by his source, cannot be accounted for at present.

ORIGINAL SAYING

I. Paul, “The Element of Music,” MS Manisa Genel Kitaplık 1705, ff. 123v, 9 - 124r, 3-9 (see Appendix B).

B/t/th/n/y-w-r-s-t-s [Theophrastus? *prōtos*?] said: Why does the soul become pleurably affected [*taṭrabu*] upon the movement of the strings of instruments? . . .

Another said: The soul has in its essence certain essential conformations [*šakl* = (?) *schēma*] on the part of the intellect which the soul is unable to express in speech in the natural manner. When nature moves the soul by way of the strings of instruments, then the soul manifests those intellectual conformations by means of the eyebrows, movement of the eyes, eyelids, and other delicate, agreeable, and graceful organs of the body, in order to indicate through that gesture [*šakl* = (?) *schēma*] and that movement the internal meaning which speech was unable to express. It is thereupon, and on account of this, that the soul is pleurably affected [*taṭrabu*].

"POPULARIZED" RENDITION OF I (see Appendix B).

II. *Ḥunayn* f. 25v, 7 - 26r, 3

One of them [philosophers] said [about music]: Music [*ḡinā'*] is a noble virtue which is too difficult for the power of speech and which it is unable to express; the soul then expresses it in melody.

When [this virtue] appears, [the soul] rejoices in it
and is pleasurably affected [*ṭaribat*] by it. Listen, then, to the soul, communicate intimately with it, and leave aside such communications with nature and contemplating it.

III. *Ḥunayn* f. 29r, 2 - 29v, 1

Another [philosopher] said [about music]: Music [*ḡinā'*] is a noble virtue which speech is incapable of expressing in words; the soul then expresses it in melody fashioned from its [own] substance, and conveys it to [other] souls by means of its [the soul's] natural makeup. [The other souls] accept it by means of the same natural makeup through which it was presented to them; when they listen to it they are pleased with it, and when they do not, they yearn for it and remember it until they break out in a pleasing song, which delights and relieves them.

HEBREW TRANSLATION OF II: WERNER-SONNE 524, No. 1

II.1. One of them said: "Music is such a sublime subject that the dialectical faculty is inadequate to its presentation, leaving the philosophers powerless. But the soul perceives that subject through the effect of melody. As soon as this sublime form becomes manifest, the soul rejoices in it, and yearns for it. Pay therefore attention to the soul, hearken to it, and restrain yourselves from the contemplation of the affairs of the transient world."

PARAPHRASES OF II

II.2. *Iḥwān aṣ-Ṣafā'* (Brethren of Purity) 1.234.14-17 (Beirut ed.). French translation by A. Shiloah, "L'Épître sur la musique des Iḥwān al-Ṣafā'," *Revue des Études Islamiques* 34 (1966) 185.

A philosopher said: Music [*ḡinā'*] has a virtue which is too difficult for speech to produce and which it cannot express in words; the soul then expresses it in rhythmic melody. When nature hears it, it derives pleasure from it and delights and rejoices in it. Listen, then, to the talk and intimate communications of the soul, and leave nature and contemplating its ornaments aside lest they deceive you.

II.3. ʿGazālī, *Iḥyāʾ* 2.373.16-17 (Cairo 1967).

There is a noble virtue in the heart which the faculty of speech is unable to express in words; the soul then expresses it through melodies. When [this virtue] appears, [the soul] rejoices and is pleasurably affected by it. Listen, then, to the soul, communicate intimately with it, and leave such communications with external matters aside.

II.4. Ibn ʿAbd Rabbihi, *Iqd* 6.4.16-18.

The philosophers claimed that a tune is the remaining part [*fadl baqiya*] of speech which the tongue is unable to produce, and which is then produced by nature in trilling [*ʿalā t-tarjīʿ*], not interrupted [*ʿalā t-taqṭīʿ*] melodies. When [this part] appears, souls fall in love with and spirits yearn for it.

PARAPHRASE OF III

Saying [11] above (*Ṣivān*/Ṣahrastānī).

APPENDIX B: ARABIC TEXTS

IV. Sayings of Theophrastus

- 1.3 وما يدل على فضله وقوته قوله "الالهية لا تتحرك" وهى مع قلة لفظها غزيرة المعنى كثيرة الفائدة
- 19 الكامل من لم يبطره الغنى ولم يستكن للفاقة ولم تهده المصائب ولم يأمن الدواثر ولم ينس العاقبة ولم يغتر بالشبيبة فبادر ما دام عليه نهار وسيله أمن وله معين وعنانه مرخى ومحظه فسيح وباعه ممتد وجوارحه طائفة
- 20 البليغ من لا يخلط بصدقه كذبا والجواد من لا يقتصر بعطيته على الاغنياء والبر من لا يزيله عن بره جهد ولا رخاء ومانع الحق فى الجهد أعذر من مانع الفضل فى الرخاء
- 21 لم يدرك الناس ما ارادوا وفاتهم ما تركوا وبادوا
- 22 ولما حضرته الوفاة اقبل على لوم الطبيعة بما معناه ان بنيان البدن لا اصل له بل بنيان النفس والاعتناء بها
- 28 وقال ثوفرسطس ان افلاطن كان اذا جلس على الشراب قال للموسيقار غننا فى ثلاثة اشياء فى الخير الاول وفى النشأة الثانية وفى ايضاخ الامور
- 29 وقال يافو فرطيس (كذا) القليل من الفعل فى المكافأة على الخير والشر اكثر من الكثير من القول لان القول عرض يضمحل والفعل جوهر يبقى
- Appendix A
- I قال ثورسطس (كذا) لما صارت النفس تطرب عند حركة الاوتار؟ ... وقال اخر ان النفس لها فى ذاتها اشكال من نحو العقل لا تقدر النفس على اخراجها بالمنطق نحو الطبيعة فمتى حرّكتها الطبيعة من طريق الاوتار اظهرت النفس تلك الاشكال العقلية بالحاجب وحركة العين والاجفان وغيرها من اعضاء البدن اللينة المواتية اللطيفة حتى تدل بذلك الشكل وتلك الحركة على المعنى الباطن الذى عجز المنطق عن اخراجه فعند هذا تطرب ومن اجل ذلك
- II فقال احدهم الغناء فضيلة شريفة تعذرت على المنطق فى قدرته فلم تقو على اخراجها فاخرجتها النفس لحنا فلما ظهرت سرت بها وطربت اليها فاستمعوا من النفس وناجوها ودعوا مناجاة الطبيعة والتأمل لها
- III فقال اخر الغناء فضيلة شريفة عجز المنطق عن عبارتها لفظا فابرزتها النفس لحنا مصوغا من جوهرها وأدته الى النفوس بطبعها فقبلته بذلك الطبع الذى اهدته اليها وارتابحت اليه عند استماعه وحثت اليه وتذكرته عند غيبته حتى رددته ترديدا يرتاح اليه ويلتذ لها ويخف عليها (كذا)

NOTES

1. I am deeply grateful to Professor W.W. Fortenbaugh, Dr. M.G. Sollenberger, and the other participants in the Liverpool Conference for the many discussions which alerted me to the existence of the problem in its various aspects and helped me focus my comments on areas of unsuspected difficulties.
2. See, for example, the reconstructed readings of Aristotle's *Metaphysics* from the Arabic translation in M. Bouyges, "La critique textuelle de la *Métaphysique* d'Aristote et les anciennes versions arabes," *Mélanges de l'Université Saint Joseph* 27 (1947-48) 147-52, and especially the list in the same author's edition of Averroës, *Tafsir Mā ba'd at-Tabī'at*, Notice (Bibliotheca Arabica Scholasticorum, Série Arabe, Tome v,1, Beirut 1952), clxi-clxxv. See also R. Walzer, "On the Arabic Versions of Books *Alpha*, *Alpha Elatton*, and *Lambda* of Aristotle's *Metaphysics*," in his *Greek into Arabic* (Cambridge, Mass. 1962) 114-28.
3. See the discussion, again with reference to the *Metaphysics*, by P. Thillet, "Remarques et notes critiques sur les traductions arabes du livre *Lambda* de la *Métaphysique* d'Aristote," in *Congrès de Lyon, Actes*, Association Guillaume Budé (Paris 1960) 114-25.
4. See L.D. Reynolds and N.G. Wilson, *Scribes and Scholars* (Oxford 1968) 50-53.
5. For an extreme—and therefore perfectly illustrative—example of the possible transformations that a Greek text may undergo in its journey through the Arabic tradition see H.H. Biesterfeldt and D. Gutas, "The Malady of Love," *Journal of the American Oriental Society* 104 (1984) 21-55.
6. See in particular F. Rosenthal, "Arabische Nachrichten über Zenon den Eleaten," *Orientalia* 6 (1937) 21-23, and, more briefly, his *Heritage* 25.
7. For a description of the transmission of the text and its various recensions, and for full references, see my "The *Šiwān al-hikma* Cycle of Texts," *Journal of the American Oriental Society* 102 (1982) 645-50.
8. The relation of the *Šiwān* to the other arabic gnomologia and the specific problems facing their prospective editor are discussed in my *Greek Wisdom* 436-50.
9. The compositional techniques of Arabic biographies of learned men and the ways of analyzing them are discussed in my "Lives of Aristotle," Part 1b. See also the same article for references to the works cited below.
10. For the author and the work see F. Rosenthal, "Al-Mubashshir b. Fātik. Prolegomena to an Abortive Edition," *Oriens* 13-14 (1960-61) 132-58. An idea of Mubaššir's method of compilation can be gained from the analysis of his biography of Aristotle in my "Lives of Aristotle," Table 1.
11. I have thus made no references to B. Dodge's translation of the *Fihrist*—*The Fihrist of al-Nadim* (New York 1970)—or to Part II of Düring's *Biographical Tradition*. For the latter see the remarks in my "Lives of Aristotle," Part 1a.
12. See above, paragraph on *The Gnomological Tradition*, and the reference in note 8.
13. It is, of course, possible that some extraneous material was interpolated in the course of transmission between the compiler of the *Šiwān* himself and the recensors of the *Muntaḥab* and *Muḥtaṣar* and Šahrastānī, and that therefore the reconstructed entry represents the original *Šiwān* material *plus* the later accretions. Preliminary investigations indicate that the *Muḥtaṣar* does contain, for some entries at least, some material interpolated from sources other than the original *Šiwān*: see Gutas *Greek Wisdom*, diagram on p. 450, and W. al-Qaḍī, "Kitāb

Šiwān al-Hikma: Structure, Composition, Authorship and Sources," *Der Islam* 58 (1981) 91-92. However, the probability of such an interpolation for a relatively minor entry in the *Šiwān* like that of Theophrastus is minimal, and in any case cannot be ascertained without a broader investigation into the entire problem of the transmission of the *Šiwān* and its recensions.

3

A Survey of Theophrastean Texts and Ideas in Arabic: Some New Material

Hans Daiber

Until recently Arabic material on Theophrastus has been neglected by classical scholars. In 1940 Otto Regenbogen in his article on Theophrastos¹ could mention only the Arabic fragments of Theophrastus' *Meteorology*.² In the meantime new texts have become known, so that it seems worthwhile to give a survey of Theophrastean texts and thoughts preserved in Arabic and (to a lesser extent) in Syriac. As we shall see, Theophrastus was known to the Arabs as a man of many accomplishments: a theoretician of music, a doxographer of Greek musical teachings, an author of gnomological sayings, and an authority in metaphysics, psychology, meteorology, botany, physics, and logic. We can show that in many cases Theophrastean material reached the Arabs through intermediate sources, mainly Peripatetic commentaries and summaries of Aristotelian books. Only in two cases are translations of genuine Theophrastean texts preserved; namely, the *Meteorology* (lost in Greek) and the *Metaphysics*.

The oldest Arabic source which informs us of Theophrastus is the bibliography in the *Fihrist* of Ibn al-Nadīm (finished in 987 A.D.). His report has been taken over in a slightly revised and expanded manner by later historians like Kiftī (died 1248 A.D.), Ibn Abī Usaybi'a (died 1270 A.D.) and Bar-Hebraeus (died 1286 A.D.).³ Their common Greek source cannot be identified; it reappears in the Arabic gnomological tradition: its most important representative is the *Siwān al-hikma* ascribed to Abū Sulaymān al-Sidjistānī and compiled at the beginning of the eleventh century A.D.⁴ The article on Theophrastus had been used by al-Shahrastānī⁵ (died 1148 A.D.) and possibly by Mubashshir Ibn Fātik (writing c. 1053 A.D.) and Kiftī. A comparative translation can be found in Chapter 2 in this volume. I confine myself to a translation of Theophrastus' bibliography found in Ibn al-Nadīm:⁶

Among his books there are: *On the Soul*, one section;⁷ *On Meteorological Phenomena*, one section;⁸ *On Education*, one section;⁹ *On Sensation and What is Perceptible through the Senses*, four sections;¹⁰ translated by Ibrāhīm Ibn Bakkūs;¹¹ *On Metaphysics*, one section, translated by Abū Zakariyā' Yahyā Ibn 'Adī;¹² *On the Causes of Plants*, translated by Ibrāhīm Ibn Bakkūs; the only extant part is the commentary on a section of book 1.¹³ Among the books attributed to him is a commentary on the *Categories*.¹⁴

I. THEOPHRASTUS ON MUSIC

The municipal library in the Turkish town Manisa owns an interesting Arabic manuscript with a treatise on ancient teachings concerning the influence of music (no. 1705, fol.123v-130v). It has the title "*The Element of Music and the Disagreement of the Philosophers Concerning its Composition and Essence*."¹⁵ It is said to be written by "Paulus" and translated into Arabic by Ishāk Ibn Hunayn. Doubtless, this text is a translation of a lost Greek doxography compiled in late Hellenistic times. The occasion of its composition is said to be a wedding feast given by king Heraclius (Harkal) for his son. During this feast the invited philosophers began to discuss the value and influence of music. At the beginning Paulus mentions Ammonius as his source; in another case, in his report on a musical theory of Plato,¹⁶ he refers to Theophrastus. We do not know whether Theophrastus is an additional source or known to Paulus only through Ammonius.

The text of Paulus has been excerpted by Hunayn, *Nawādir al-falāsifa*.¹⁷ Probably this excerpt was used in later Islamic times by the Ikhwān al-Safā', al-Ghazālī and Ibn 'Abdrabbihī;¹⁸ further by the Persian poet Yūsuf Nizāmī (died 599/1202-3) from Ganja (= Kinovabad).¹⁹ We must take into account the possibility that some of the sayings in the text of Paulus go back to Theophrastus. Two possible examples²⁰ have been translated by Gutas.²¹

It seems that Theophrastus' treatise on music not only contained doxographical material but also Theophrastus' own theories. Al-Shahrastānī has mentioned some of them.²² His source was the *Siwān al-hikma*; two of its preserved (slightly shortened) versions, the *Muntakhab*²³ and the *Mukhtasar* (not yet edited), give us an idea how al-Shahrastānī used and shortened his source. However, we still have to take into account the possibility that al-Shahrastānī directly or indirectly used a further source besides the *Siwān al-hikma*. He explicitly refers to Theophrastus' treatise on music.²⁴ Tentatively we can ascribe to this treatise two theories of Theophrastus which are mentioned only by al-Shahrastānī.²⁵ Franz Altheim and Ruth Stiehl²⁶ as well as Olof Gigon²⁷ have pointed at post-Aristotelian or post-Platonic pythagoreanism. The doctrines cannot be found in the treatise of Paulus or in the preserved version of Hunayn's *Nawādir al-falāsifa* and its excerpts in the

Siwān al-hikma. Therefore it still remains to be proved that al-Shahrastānī did not use a treatise of Theophrastus on music.

II. THEOPHRASTUS ON METAPHYSICS

Based on an unknown Theophrastean source are the doctrines of the divine unmoved mover and of the stars provided with soul and Nous, both of which are described in the *Siwān*,²⁸ and the doctrine of human intellect described in al-Shahrastānī.²⁹ The doctrines of the divine unmoved mover and the stars follow Aristotle.³⁰ The theory that "divinity is not in motion" is followed by a commentary which a priori should not be classified as non-Theophrastean. According to this comment, the consideration of the mentioned theory leads to conclusions concerning the unfathomable and sublime knowledge of God.³¹ This reflects the Aristotelian teaching of the endless Nous, the divinity which unmoved is moving all things.³²

In this connection we should consider a fragment that an anonymous Arabic scholar has transmitted in his doxographical enumeration of ancient doctrines on scientific questions, preserved in an Istanbul manuscript³³ on fol. 72^v v.7-ult.:

قال شاذو فرسطوس تلميذ ارسطو عن الباري فقال :
سبق الاوقات وجوده والاعصار كونه والدهر مبتدؤه^١ والابتداء
ازله ، بتجهيزه الجواهر وتصويره لها علمنا ان لا جوهر
له ، انشأ البرايا وكونها ولا منشيء له ولا مكنون^٢ ، لم
يفارق الاشياء بل صارها في كل الامور ولو شاء كلها لكان
منها ، لا قبل له ولا بعد له ، وسط وآخر كانا^٣ له
طرفين^٤ ، ليس له آلة السمع فيسمع ولا بصر فيبصر
ولا ذوق^٥ فيتطعم^٦ ولا حاسة لمس فيلمس - جل ثناؤه
وتقدس اسمائه ،

- (١) مبتداه مخطوط / ٢ + له ؟ / ٣) كان مخطوط /
(٤) طرفان مخطوط / ٥) يذوق مخطوط / ٦) فينطعم مخطوط /

Theophrastus, the pupil of Aristotle, held the following view on the creator: Time [pl.] is preceded by His existence and being; (also) the endless time by His beginning and the beginning by His eternity. Because He has prepared and formed the substances, we know that He does not have a substance. He has brought into being the creation, without having himself a creator and maker. He is not separate of the things but has become them, being in all things; would He wish [to be] all [things], He would be a portion of them. He has no before and no after; middle

and end are two aspects of Hīm. He has not the organ of the ears, to hear; not the organ of the eyes, to see; not the gustatory sense, to taste and not the sense of touch, to feel.—Be great His praise and be sacred His names!³⁴

This fragment may go back to the *Book on the Unity (of God)*, addressed to *Democritus* (or: *Damocrates?*), mentioned by Ibn Abī Usaibi'a.³⁵ It stresses—not without Neoplatonic shaping—the timelessness and uncreatedness of the creator; his transcendency and incorporeality on the one hand, and his relation to the created substances as creator and part of the world on the other. Here, too, we are reminded of Aristotle's divine cause, which moves without being moved (cf. *Metaph.* 1072a23-5), in a surprising antithetical manner: the text tries to combine God's transcendency and immanency. Are its starting points Theophrastus' Aristotelian and antistoic doctrine of the eternity of the world³⁶ and Theophrastus' identification of God's will with the process of nature?³⁷ In the Arabic text Theophrastus appears to be a connecting link between the late philosophy of Aristotle and Stoic philosophy: he is combining the doctrine of the transcendent mover with the doctrine of the immanent cause.³⁸

The matter in question deserves to be investigated. For this the Arabic translation of Theophrastus' *Metaphysics*, made by Yahyā Ibn 'Adī (died 974 A.D.) can be used. This translation is preserved in two manuscripts, in Teheran (Malik 5925; translation ascribed to Ishāk Ibn Hunayn) and Oxford (Ousey 95, no.16; not complete). As D.S. Margoliouth has shown in his notes on the Oxford manuscript,³⁹ the Arabic translation is based on a better Greek text.⁴⁰

III. THEOPHRASTUS ON THOUGHT AND PERCEPTION

According to the Arabic tradition,⁴¹ Ibn Bakkūs⁴² translated Theophrastus' treatise on sensation. This treatise is extant neither in Greek nor in Arabic and apparently had no influence on the philosophical discussions of the Arabs. Ibn Rushd had to refer to Themistius' report on Theophrastus' teaching in his commentary on Aristotle's *De anima*, which was translated by Ishāk Ibn Hunayn.⁴³ Furthermore, it remains uncertain whether the fragment in al-Shahrastānī⁴⁴ on the relation between thought and perception according to Theophrastus was part of the above-mentioned treatise. A translation of this fragment can be found in Gutas's chapter;⁴⁵ if we change his translation of *matbū'* (Gutas: "innate") and *masmū'* (Gutas: "through listening") to "provided with a distinct nature" and "provided with hearing," the scope of the text becomes clear: As in Aristotle,⁴⁶ human Nous requires for its acting the impulse of sensation. The comparison of the perceiving

or passive Nous with seed and water and of the active Nous with earth confirms Themistius' report on Theophrastus. According to it the ability to think is independent of the object; however, under the influence of sensation the potential Nous becomes the active Nous.⁴⁷

IV. THEOPHRASTUS ON METEOROLOGY

For classical scholars the Arabic tradition of Theophrastus' *Meteorology* is important. The Greek original has been lost, but there exist both an anonymous Syriac translation in fragmentary form and an Arabic epitome made by Bar Bahlūl from the Syriac translation. The Arabic epitome was published in 1918 by Gotthelf Bergsträsser;⁴⁸ the fragmentary text of the Syriac translation was discovered and described by J.H. Drossaart Lulofs in 1953⁴⁹ and published by E. Wagner and P. Steinmetz in 1964.⁵⁰ Based on these texts Steinmetz wrote a monograph on the physics of Theophrastus.⁵¹ Further, in 1979 Fuat Sezgin⁵² drew our attention to an Arabic manuscript in Rampur, India (Ridā 2367, p.121-153; written in the seventeenth century A.D.), which perhaps in the translation of Ibn al-Khammār (born 943 A.D.) contains a complete version of Theophrastus' *Meteorology*.⁵³ Some observations on this important manuscript have been presented by Sezgin, who admits the possibility⁵⁴ that the Rampur text does not reproduce the original text of Theophrastus but a late Hellenistic summary. We do not know the exact relation of the Rampur text to the epitome of Bar Bahlūl and to the unedited meteorological treatise of Ibn al-Khammār,⁵⁵ which according to Sezgin⁵⁶ contains quotations from Alexander of Aphrodisias, Olympiodorus, Nicolaus Damascenus, and Theophrastus. An edition of the mentioned texts will perhaps enable us to investigate to what extent meteorology since al-Kindī (died after 870 A.D.) has combined Aristotle and Theophrastus.⁵⁷ This investigation should include both the fragmentary Syriac translation of Nicolaus Damascenus' meteorological summary⁵⁸ and the meteorological passages in Nicolaus Damascenus' summary of Aristotle's book *On plants*.⁵⁹ We should not forget that Nicolaus Damascenus has used Theophrastean material in his commentaries on Aristotle.⁶⁰

V. THEOPHRASTUS ON BOTANY

Theophrastus' *Causae plantarum* is said to have been translated by Ibn Bakkūs and so seems to have been known to the Arabs,⁶¹ but during his studies on "*Die Natur- und Geheimwissenschaften im Islam*"⁶² Manfred Ullmann could not find any citations going back directly to the biological works of Theophrastus. There was hope of finding some material in a younger colleague of Ibn Bakkūs at the 'Adudiyya-hospital in Baghdād: namely, in

Abū l-Faradj Ibn al-Tayyib, who wrote a book *On Plants*. However, a glance at the unique manuscript Escorial 888 (fol.14r-81) has removed even this hope. The as yet unedited manuscript is a compilation of at least three different sources. (1) The first 24 chapters (fol. 14r-50r v.13) probably have their origin in a late Greek compilation, which based itself on Aristotelian teleology and on the doctrine of primary qualities and *pepsis*, and which offered some explanations not traceable in known Greek sources. The compiler has mentioned numerous analogies to the world of animals and has used Aristotle's *De generatione animalium*. In addition, he has taken up some ideas found in Aristotle's *Meteorology*, Book IV, and has used (in chapter 13 and 14) Nicolaus Damascenus' summary of Aristotle's book *On Plants*.⁶³ As far as we can see this use of Greek sources does not depend upon the known Arabic translations; therefore the text does not seem to be derived from an Arab compiler. Furthermore, the compilation contains some ideas that presuppose discussions of Greek botanists after Theophrastus.⁶⁴ (2) Chapters 25-30 (fol.50r v.14-57v v.5) are based on a slightly shortened paraphrase of Book I of Nicolaus Damascenus' summary of Aristotle's book *On Plants*. Use is made of the Arabic translation of Ishāk Ibn Hunayn (finished around 900 A.D.) in the revision of Thābit Ibn Kurra. The same translation has been used in Ibn Sīnā's book *On Plants*.⁶⁵ At the same time we can exclude the possibility that Ibn al-Tayyib has based his knowledge of Nicolaus' summary on Ibn Sīnā. (3) The final chapter 31 (fol.57v 6-75v) with the title "Notable Peculiarities of Plants" is an unsystematic enumeration and does not offer new details. Its sources are not identified.

For the present we have to confine ourselves to the statement that we have no Arabic text which is based directly on Theophrastus' botany. An exception is Nicolaus Damascenus' summary of Aristotle's *On Plants*, which is only preserved in a Syriac fragment and in an Arabic translation (see above). The Arabic version was widely used by the Arabs⁶⁶ and was translated into Hebrew, Latin, and Greek(!). In this summary of Aristotle's lost book *On Plants*, Nicolaus has referred to numerous Aristotelian and non-Aristotelian works, among them Theophrastus' *Causae plantarum* and *Historia plantarum*.⁶⁷ Further research on details may enable us to detect Theophrastean elements in Arabic botany, but they will be traceable to Nicolaus Damascenus' summary or eventually to Dioscurides and Galenus, not directly to Theophrastus.⁶⁸

VI. THEOPHRASTUS ON PHYSICS

According to the *Fihrist* of Ibn al-Nadīm,⁶⁹ Ibn al-Khammār (tenth century A.D. and the supposed translator of Theophrastus' *Meteorology*)⁷⁰ translated into Arabic Theophrastus' *Problemata physica*. On this book Abū l-Faradj

Ibn al-Tayyib is said to have written a commentary.⁷¹ Neither is preserved, so that we must content ourselves with a fragment in al-Bīrūnī (tenth/eleventh century A.D.).⁷² F. Sezgin⁷³ has drawn our attention to this fragment, which is presented here for the first time in translation:

In the *Problemata physica* of Theophrastus (the following is said): If single vessels are filled up with strips of lead, they are heavier than by being filled with gold and silver.

This statement of Theophrastus is criticized by al-Bīrūnī in the following manner:

According to my opinion this matter in reality does not depend on the above mentioned weights. If we consider more closely a strip of the three (mentioned metals), the opinion about silver would turn out to be true but not that about gold. It is as if Theophrastus taught: (1) The strip of lead can be totally melted, so that only little air is left, which used to separate the strips that were isolated and separated. (2) If gold and silver are melted and poured into vessels, air gets cut off in them. Consequently the vessels cannot be filled up any more with them [both metals] and there remain numerous places in them [the vessels] which are void of air. If then [Theophrastus] has this in mind, it is absolutely necessary for him to presuppose a narrow outlet in the vessels. Moreover, his opinion proves to be wrong, if the vessels are provided with two outlets, the one being intended for pouring in [melted metals] and the other for the egress of air, and [if] they are made hot so that what has been poured in does not become solid until it has entered their [the vessels'] interior. [Finally] lead contains some silver, which becomes visible during its combustion.

According to this text al-Bīrūnī did not accept Theophrastus' doctrine of the specific weight of metals.⁷⁴ The starting point of his criticism is not only the last-mentioned observation: that lead contains some silver, but also his theory of interstices in metals: that it is these interstices being full of air and not the specific weights of metals which entail differences in weight. This argument of al-Bīrūnī reminds us of an explanation of Democritus,⁷⁵ according to which iron has more and greater interstices than lead and therefore has less weight. Theophrastus did not accept this argument; for him things are light and heavy per se (*haplōs*).⁷⁶

A second fragment which may derive from Theophrastus' *Problemata physica* is preserved in the treatise *Kitāb al-Rawābi*⁷⁷, a commentary on the *Summa Platonis*, which is only available in Latin translation:⁷⁸ "Already Theophrastus has taught in one of his treatises: Evil-smelling sinks to the ground because of its thickness and rises up because of its thinness."⁷⁸ This fragment fits well with what is transmitted from Theophrastus in Greek

sources.⁷⁹ In particular, thickness and thinness as the cause of different kinds of smell can be found in Theophrastus' *Peri osmōn*, 49f.: heavy perfumes cause headaches, because they are composed from heavy substances; their influence can be reduced and annihilated by perfumes which due to their heat and lightness permeate all things,

Finally, in Arabic literature we repeatedly find quotations from Theophrastus' book *On stones*. An examination immediately reveals that their source is not Theophrastus' lost book *On stones* but an Arabic translation of a spurious text from late Hellenistic times. Contrary to Theophrastus—an empiric—the author of the other text has ascribed to stones magical powers.⁸⁰

VII. THEOPHRASTUS ON LOGIC

In the eleventh century A.D. Ibn Butlān argued against the thesis of Ibn Ridwān, that the study of books should be preferred to oral instruction. According to him, this can be proved by the fact that Aristotle's *Categories* would have been incomprehensible in many respects if Aristotle's pupils, namely Theophrastus and Eudemus, had not heard Aristotle's own explanations of the text.⁸¹

Traceable to Alexander of Aphrodisias' commentary on Aristotle's *Analytica priora*⁸² is the mention of Theophrastus' logic in al-Fārābī's commentary on Aristotle's *De interpretatione*,⁸³ in Ibn Rushd's *Tahāfut al-tahāfut*⁸⁴ and his treatise *On the Modality of Propositions*.⁸⁵ They confirm reports of Aristotle's commentators according to which Theophrastus differs here from his teacher Aristotle.⁸⁶ Alexander's commentary on the *Analytica priora* was not the only source which provided Arabs with the logical doctrines of Theophrastus.⁸⁷ We should add Alexander's refutation of Galenus, *De possibilitate*. The Greek texts of both authors are lost, but they are preserved in an Arabic fragment, of which the Galenic portion makes mention of Theophrastus. This enables N. Rescher to prove that Arabic logicians referred in their doctrine of temporal modalities to Theophrastus and to the Peripatetic refutation by Alexander of Aphrodisias.⁸⁸ Like Theophrastus, they distinguished between Aristotelian "omnipotent necessity" and "absolute necessity."⁸⁹

NOTES

1. *Paulys Real-Encyclopädie der classischen Altertumswissenschaft*, Suppl.7, col.1354-1562.
2. On these see section IV below.
3. See Gutas, chapter 2 in this volume.

4. See Wadād al-Qādī, "*Kitāb Siwān al-Hikma*: Structure, composition, authorship and sources," *Der Islam* 58 (1981) 87-124. Cf. Daiber, "Der *Siwān al-hikma* und Abū Sulaimān as-Sigistānī in der Forschung," *Arabica* 37 (1984), 39-43.
5. Cf. below, section I.
6. *Kitāb al-Fihrist*, ed. G. Flügel (Leipzig 1871-2; repr. Beirut 1964) p.252.7-11; ed. Ridā-Tadjaddud (Teheran 1971) 312.23-6; trans. Bayard Dodge, *The Fihrist of al-Nadīm* (New York 1970) 2.607. A German translation with commentary can already be found in August Müller, *Griechische Philosophen in der arabischen Überlieferung* (Halle 1873) 22.
7. A. Müller (above, note 6) 22n. thinks of "Sayings on the Soul" ascribed to Theophrastus and preserved in Syriac (ed. E. Sachau, *Inedita Syriaca*, Halle 1870 = repr. Hildesheim 1968, Syriac text ('w) = English trans. B.H. Cowper, *Syriac Miscellanies*, London 1861, p.43). However, this Syriac text is a collection of gnomological sayings by different Greek philosophers; only one saying is ascribed to Theophrastus.
8. See section IV below.
9. This may be Theophrastus' *Peri paideias* (not extant in Greek) or his *Ēthikoi charaktēres* or a collection of gnomological sayings.
10. = Theophrastus, *Peri aisthēsēōn*; see section III below.
11. Or Bak(k)ūsh. On this scientist and physician at the 'Adudiyya-hospital see section V below.
12. Bar Hebraeus, *Ta'riḫ mukhtasar al-duwal* (Beirut 1958) 56.2 adds: "From Syriac into Arabic." See section II below.
13. See section V below.
14. Cf. Ibn al-Nadīm (above, note 6), ed. Flügel 348.21; ed. Ridā-Tadjaddud 309.4f.; trans. Dodge 2.598. Ibn Abī Usaibi'a, *Kitāb 'Uyūn al-anbā' fī tabakāt al-atibbā'*; ed. A. Müller (Königsberg, Pr. 1884, repr. 1972) p. 69,-7 adds: "A Book On the Unity [of God], Addressed to Democritus. A Book on *Problemata physica*." Cf. below, section II (n.35) and VI.
15. *Kitāb 'Unsur al-mūsikā wa-mā ftarakat-i-l-falāsifa 'alaihi min tarkibihī wa-mā'iyatihī*. I mainly follow the translation of F. Rosenthal in his article "Two Graeco-Arabic Works on Music," *Proceedings of the American Philosophical Society* 110 (1966) 261.
16. Ms. Manisa 1709, fol.124v,-5; see Rosenthal (above, note 15) 264a.
17. See the comparison of both texts in Rosenthal (above, note 15) 262f.
18. See Gutas, chapter 2, Appendix A, in this volume.
19. See A. Loewenthal, *Honein Ibn Ishak, Sinnsprüche der Philosophen* (Berlin 1896) 17f.
20. Ms. Manisa 1705, fol.123v9; 124r3-9. See, however, on fol.123v9, Rosenthal 263b.
21. See note 18 above.
22. See the translation in Gutas, section IV, sayings nos. 11-14.
23. Ed. D.M. Dunlop (New York 1979) § 84f.
24. *al-Milal wa-l-nihal*, ed. W. Cureton (London 1846; repr. Leipzig 1923) p. 337 l.5 f.b. Gutas's paper supposes an addition of al-Shahrastānī. This is possible but at the moment not yet provable.
25. *al-Milal*, ed. Cureton p.337.20-338.5 (= English translation in Gutas's paper, section IV, sayings nos. 11-12).
26. "New Fragments of Greek Philosophers," in *East and West* N.S.12 (1961) p.15.
27. In F. Altheim, *Geschichte der Hunnen* V (Berlin 1962) 96.

28. Namely (1) *Muntakhab*, ed. Dunlop lines 1175-77 (excerpted by al-Shahrastānī, ed. Cureton p.337.17) = translation of Gutas, section IV, saying no. 1; (2) *Muntakhab*, ed. Dunlop lines 1186-88 (excerpted by al-Shahrastānī, ed. Cureton p.337.18-20) = translation of Gutas, section IV, saying no. 5.
29. See section III below.
30. Cf. P. Moraux in Altheim/Stiehl (above, note 26) p.14b (where also an English translation can be found) and O. Gigon in Altheim (above, note 27) 95.
31. In this interpretation I differ from the translation of Gutas (section IV, saying no. 1), who refers the suffix *-hū* in the sentence *istadalla bibā 'alā 'ilmihī wa-bu'di ghawrihī wa-djalālātī mahallihī min-a-l-'ilm* not to God but to the preceding statement.
32. Cf. Theophrastus, *Metaphysics* 1.5f. and the translation with commentary by W.D. Ross and F.W. Fobes (Oxford 1929; repr. Hildesheim 1967); further Ed. Zeller, *Die Philosophie der Griechen* 2.2 (repr. Darmstadt 1963) 827. Theophrastus (*Metaph.* 1.5ff.) calls our attention to the following difficulty in Aristotle's theory of the unmoved mover: how can the stars circle in an eternal movement and at the same time—in conformity with the Platonic theory of *mimēsis*—strive after an imitation of the divine unmoved mover? This question of Theophrastus has been taken up by al-Ghazālī (d. 1111 A.D.); Ibn Rushd did not give an answer in his refutation of Ghazālī: cf. the English translation of S. Van Den Bergh: *Averroes' Tahafut Al-Tahafut* (London 1954; repr. 1978) vol.1 p.295f.; comm. in vol.2 p.163 and vol.1 p.xxviii.
33. Aya Sofya 2450, fol.72-106: *Kitāb fihī ārā' al-hukamā' fī t-tabi'iyāt wa-fihī l-ārā' wa-l-kalimāt al-rūhāniyya li-l-mutakaddimīn*.
34. The eulogy at the end seems to be an addition of the (Christian?) translator.
35. See above, n.14. On the confusion Democritus/Damocrates, see Daiber, "Democritus in Arabic and Syriac Tradition," in *Proceedings of the 1st International Congress on Democritus*, Xanthi 1984, B, 251-265.
36. Cf. Zeller (above, note 32) 836.
37. Cf. *ibid.*, 828, n.4.
38. Cf. O. Regenbogen (above, note 1) 338.5-8.
39. *Journal of the Royal Asiatic Society* (1892) 192-201.
40. A not-yet-published edition has been prepared by Ilai Alon in his Jerusalem thesis of 1973.
41. See above, notes 10, 11.
42. Or Bak(k)ūsh; see note 11.
43. See below, note 47.
44. *al-Milal*, ed. Cureton 338.5-8; also transmitted, as a saying of Ibn Hibbān al-Bustī (died 354/965) himself in his *Raudat al-'ukala' wa-nuzhat al-fudalā* (ed. Muhammad Muhiyaddīn 'Abdalhamīd a.o., Beirut 1977) p.77.16-19.
45. Chapter 2 in this volume, section IV, saying no. 15.
46. Cf. *De anima* 429b22ff.; *Historisches Wörterbuch der Philosophie*, ed. Joachim Ritter II (Darmstadt 1972) 67f.
47. Cf. Themistius, *In libros Aristotelis De anima paraphrasis*, ed. R. Heinze, *CIAG* vol.5.3 p.107.30ff.; Theophrastus, *Metaph.* 8.25; Zeller (above, note 32) p.848-850. Themistius' report became known to the Arabs in the translation of Ishāk Ibn Hunayn (on this see H. Gätje in *Der Islam* 54 (1977) 272-91); cf. the edition of M.C. Lyons, *An Arabic translation of Themistius' Commentary on Aristoteles' De anima* (Thetford 1973 = *Oriental Studies* 2) 195f. Surely Ibn Rushd had this report in mind when he sketched Themistius' and Theophrastus'

- doctrine of the intellect: see Ibn Rushd, *Commentarium magnum in Aristotelis De anima libros*, rec. F. Stuart Crawford (Cambridge, Mass. 1953 = CCAA, vers. Lat. t.6.1) p.389.56ff.; 390.112ff.; 399.351ff.
48. *Neue meteorologische Fragmente des Theophrast*, mit Zusätzen vorgelegt von Franz Boll = *SB Heidelberg, philol.-hist. Kl.*, Jg.1918, 9.Abh. Bergsträßer, however, did not recognize the identity of the epitomizing redactor with Bar Bahlül.
 49. "The Syriac Translation of Theophrastus' Meteorology," in *Autour d'Aristote*, Recueil d'études de philosophie ancienne et médiévale offert à Mgr. Mansion (Louvain 1953) 433-49.
 50. *Der syrische Auszug der Meteorologie des Theophrast* (Wiesbaden 1964) = *Akademie der Wissenschaften und der Literatur* (Mainz); *Abhandlungen der geistes- und sozialwissenschaftlichen Klasse*, Jg.1964(1).
 51. *Die Physik des Theophrastos von Eresos* (Bad Homburg Berlin Zurich 1964) = *Palingenesia* Bd. 1.
 52. *Geschichte des arabischen Schrifttums* 7 (Leiden 1979) 216-23.
 53. Sezgin mentions further Arabic manuscripts with a section of the text ascribed to Ibn Sīnā.
 54. Sezgin (above, note 52) 218.
 55. *Makāla fī l-āthār al-mutakhayyila fī l-djauw*.
 56. Sezgin (above, note 52) 284.
 57. Cf., for example, Daiber, *Ein Kompendium der aristotelischen Meteorologie in der Fassung des Hunain Ibn Ishāq* (Amsterdam/Oxford 1975 = *Verhandelingen der Koninklijke Nederlandse Akademie van Wetenschappen*, afd.Letterkunde, nieuwe reeks, deel 89 = *Aristoteles Semitico-Latinus, Prolegomena et Parerga* 1) 85, 87ff.
 58. The Syriac manuscript Cambridge Gg 2.14 has been called to our attention by J.H. Drossaart Lulofs; see Daiber (above, note 57) 21, n.18
 59. On this summary see the following section.
 60. See the following section.
 61. See above, introduction.
 62. Leiden 1972 = *Handbuch der Orientalistik* 1, Ergänzungsband 6.2, index s.n. Theophrast.
 63. See Paul Moraux, *Der Aristotelismus bei den Griechen* 1 (Berlin New York 1973) = *Peripatoi* 5) 487ff.; Ullmann (above, note 62) 71ff.; a critical edition based on the Arabic, Syriac, Hebrew, and Latin-Greek material is being prepared by J.H. Drossaart Lulofs.
 64. See my paper "Abūl-Faraj Ibn at-Tayyib on Plants: An inquiry into his sources," *The Third International Symposium on the History of Arab Science* (Kuwait December 10-14, 1983).
 65. See *al-Shifā'*, *al-Tabī'iyāt* 7, ed. Ibrāhīm Madkūr (Cairo 1965).
 66. Cf. Ullmann (above, note 62).
 67. Cf. some preliminary results in J.H. Drossaart Lulofs, "Aristotle's Peri Phytōn," *The Journal of Hellenic Studies* 77 (London 1957) 75-80.
 68. This is in conformity with the results of Ullmann (above, note 62) 74. F. Sezgin (above, note 52) 388 refers to citations ascribed to Theophrastus in the encyclopaedia on simple remedies by Ibn Samadjūn, a collection of citations taken from Greek and Arabic texts. It is still an open question whether Ibn Samadjūn has used translations of Theophrastean works or translations of Greek works which cite Theophrastus among their sources.
 69. Ed. Flügel 265; ed. Ridā-Tadjaddud 323.16 (above, note 6) = Ibn Abī Usaybi'a (above, note 14).

70. See above, section IV.
71. See the list of books composed by Abū l-Faradj Ibn al-Tayyib in the Arabic manuscript Nuruosmaniye 3610 (Istanbul) f. 1^r.
72. *Kitāb al-Djamāhir fī ma'rifat al-djawābir*, Haydarābād 1355, p. 258f.
73. *Gesch.d.arab.Schr.* (above, note 52) 7.223. Sezgin, however, thinks (without giving reasons) of a pseudepigraphic text.
74. On this doctrine see Steinmetz (above, note 51) 263f.
75. Mentioned by Theophrastus, *Peri aisthēseōn* 62; see D. O'Brien, *Theories of Weight in the Ancient World* 1 (Paris-Leiden 1981) 131ff., 377ff.
76. Cf. Theophrastus, *Peri aisthēseōn* 88f.; G.M. Stratton, *Theophrastus and the Greek Physiological Psychology before Aristotle* (Amsterdam 1964) 61. Here Theophrastus criticizes Plato and follows Aristotle, *De caelo* 4.2 (see Stratton 219).
77. Cf. Ullmann (above, note 62) 155.
78. Ed. by Badawī, *al-Aflātūniyya l-muhdatha 'ind al-'Arab* (Cairo 1955) 139.14f.
79. Cf. Zeller (above, note 31) 835, n.9.
80. Cf. Ullmann (above, note 62) 111f.
81. Cf. Joseph Schacht and Max Meyerhof: *The Medico-Philosophical Controversy between Ibn Butlān and Ibn Ridwān* (Cairo 1937) = The Egyptian University, Faculty of Arts, Publications no.13) 39. Cf. also the additions of al-Kifti, *Ta'rikh al-hukamā'*, ed. A. Müller and J. Lippert (Leipzig 1903) 106.18ff., and Bar Hebraeus (above, note 12) 55.21ff. in their reproduction of Ibn al-Nadīm's article on Theophrastus.
82. *CIAG* 2.1, e.g., p.220.9ff. (trans. by I.M. Bochenski, *Formale Logik*, 2nd rev. ed. Freiburg/Munich 1962, § 17.13).
83. See the translation of F.W. Zimmermann, *Al-Fārābī's Commentary and Short Treatise on Aristotle's De Interpretatione* (London 1981) 45 (commentary 255). For further allusions to Theophrastus' logic see Zimmermann, index.
84. Cf. Van Den Bergh (above, note 32) 1.262 and 2.147 (on p.262, n.3) with references to Alexander of Aphrodisias' commentary on Aristotle's *Analytica priora* (above, note 82) 388.17.
85. See D.M. Dunlop, "Averroes (Ibn Rushd) on the Modality of Propositions," *Islamic Studies* 1 (Karachi 1962) 23-34 (also in al-Dirāsāt al-islāmiyya 1.1 [Karachi 1965] 49-55); an English translation with commentary can be found in N. Rescher, *Studies in the History of Arabic Logic* (Pittsburgh 1963) 91-105 (on Theophrastus see 95). Already Moritz Steinschneider, *Die hebraeischen Übersetzungen des Mittelalters und die Juden als Dolmetscher* (Graz 1956/¹ 1893) 100f. had drawn attention to this text and its mention of Theophrastus' doctrine.
86. Cf. the already-mentioned place in Alexander of Aphrodisias, and further Rescher, *Studies* (above, note 85) 92.
87. It is, however, not clear how the Arabs got acquainted with the text of Alexander: Compare on the Syriac-Arabic tradition (a translation is not yet available) F.E. Peters, *Aristoteles Arabus* (Leiden 1968) 15f. and M. Steinschneider, *Al-Farabi* (St.-Petersbourg 1869) = Mémoires de l'Académie Impériale des Sciences de St.-Petersbourg, VII^e série, t.XIII, no.4) 23-43.
88. A rather illegible facsimile of the Arabic text of Alexander (Escorial 798 fol.59v) has been edited and provided with translation by N. Rescher and M.F. Marmura, *The Refutation by Alexander of Aphrodisias of Galen's Treatise on the Theory of Motion* (Karachi 1967) 69-71, 153 (facsimile).
89. See N. Rescher, *Studies in Arabic Philosophy* (Pittsburgh 1966) 106 = Rescher, *Temporal Modalities in Arabic Logic* (Dordrecht 1967) 47 = Rescher/Marmura (above, note 88) 68.

4

The Starting Point of Philosophical Studies in Alexandrian and Arabic Aristotelianism

Dimitri Gutas

In a number of recent articles I have been investigating different aspects of the source criticism of Arabic texts transmitting Greek material and of their immediate predecessors, Greek texts from the late Alexandrian period dealing with the history of philosophy. Specifically, I have been trying to argue that the former are frequently extant in a form that cannot be taken at face value to reflect the Greek original because they underwent alterations that can be detected only by first tracing their transmission back to their point of entry into Arabic and thence into Greek, and that the latter display a schematized conception of the history of philosophy which cannot be taken literally because its purpose, whatever else it might have been, was not to provide objective information on the subject. It is becoming increasingly apparent that these texts exhibit a certain tendentiousness, which source criticism will have to address and correct before they can yield any information that will be useful in areas other than the study of the particular text involved.¹ This tendentiousness is not uniform or homogeneous in all these texts, and the task that lies ahead is to specify and define its various aspects for the different periods and authors. Here I would like to contribute some further evidence toward that goal, by dealing with a text about Theophrastus.

The text in question is a passage from Fārābī's (d. 950) *Prolegomena to the Study of Aristotle's Philosophy* (*Mā yanbagī an yuqaddama qabla ta'allum falsafat Aristū*), according to which Theophrastus allegedly maintained that the starting point of philosophical studies is ethics or the improvement of one's character (cited below, section 7).² This little essay is nothing else but an adaptation, almost a translation, of the Alexandrian introductions to the study of Aristotle, complete with all the standard arguments;³ Fārābī can be said to be its author only to the extent that he reworked, if at all, the

translated version available to him. The only formal difference between Fārābī's version and its Alexandrian archetypes is that it contains only nine sections to their ten; Fārābī omits the tenth section on the preliminaries to each separate work of Aristotle apparently because he intended his essay to be autonomous and not attached to a commentary on the *Categories*, as is the case with the Greek introductions. The order of the nine sections in Fārābī, which reproduces exactly that in Simplicius, is the following: (1) origin of the names of the philosophical schools; (2) classification of Aristotle's works; (3) the starting point of philosophical studies; (4) the final goal of philosophy; (5) the way to the final goal; (6) Aristotle's style; (7) the purpose of Aristotle's obscurity; (8) qualifications of the teacher; (9) qualifications of the student. The overall relation which Fārābī's text bears to those of the Alexandrians is a subject for future study; here I shall concentrate on the third section and trace the tradition to which it belongs in order to assess the reliability of the information about Theophrastus.

1. The origins of the formal argument in the Aristotelian tradition about the starting point of philosophical studies may go back to Andronicus, as Moraux suggests, although this is far from certain.⁴ The particular form of the argument which interests us here, however, can be traced starting with Ammonius (*fl. ca.* 485). He says that in discussing the starting point of philosophical studies (*pothen arkteon*), it follows naturally (*akolouthon ēn*) that one should start with (philosophical) ethics, but since understanding ethics also depends on logic, then all philosophical instruction ought to start with logic. The one proviso which he advances is that even before logic one ought to acquire a "prephilosophical morality"⁵ without the help of philosophical ethics (*prokosmēsantas . . . ta . . . êthē kai dīcha tēs êthikēs pragmateias*), which will be studied after logic.⁶ Ammonius here has just mentioned a moral predisposition as a general precondition and two philosophical subjects, ethics and logic, as the possible starting points of philosophy. His argument is essentially normative, based on a vague sense of logical priority expressed through the impersonal *akolouthon ēn*. There is no question or even interest in presenting any historical background on the issue, i.e., who was the first philosopher to have made such claims.

2. In two of Ammonius' students, we see different tendencies developing. Simplicius (*fl. ca.* 533) essentially repeats Ammonius' normative argument in a more elaborate form but, significantly, adds a historical dimension: instead of basing his argument on an impersonal sense of logical priority, he refers to anonymous authorities: "Some people say that one ought to start with logic, . . . others with ethics" (*tines men . . . tines de*). In the elaboration of the normative part of the argument which next follows, the names he cites (Aristotle and the Pythagoreans) function merely as a framework for his explication of Ammonius' position, namely, that before logic one

should acquire correct opinions (*orthodoxastikōs*) through “unwritten habituation and untutored exhortations”; then follow logic and philosophical ethics.⁷

Simplicius is thus the first Alexandrian scholar whose work is extant to have divided the *pothen arkteon* argument into two parts: one historical, stating the various views of previous philosophers, and the other normative, presenting the position of Ammonius just described. In the treatment of the argument by subsequent scholars, the second, normative part, though much amplified with the addition of further details, remained essentially unaltered, while the first, historical part, underwent qualitative changes and was transformed from a mere introduction to the second part in Simplicius into a doxography of historical views on the subject in later authors. It is this historical part that interests us here, because the name of Theophrastus in Fārābī’s passage occurs in that part of the argument; the normative part, recommending the progression from “prephilosophical morality” to logic to philosophical ethics, remained static throughout. It is also to be noted that the distinction between “prephilosophical morality” and philosophical ethics was drawn only in the normative part; in the historical part *ethics* is used indiscriminately and was apparently intended to signify philosophical ethics. Since the name of Theophrastus in Fārābī and Ibn at-Ṭayyib (below, sections 7 and 8) occurs in the historical part, the reference is to philosophical ethics.⁸

3. Philoponus (ca. 490-530) takes the first step toward making history subservient to schematic, stylized, and idealized instruction. His normative argument is precisely like that of Ammonius and Simplicius, i.e., practical morality ought to come first, and it is to be followed by logic and then philosophical ethics (*prōton men orthodoxastikōs . . . hysteron kai apodeiktikōs*). In the historical part, however, (a) he increases the number of starting points from two to three by adding physics, in an unconscious response to the scholastic call for comprehensiveness and increasingly greater use of the method of *dihairesis* in the presentation of the material, and (b) elevates the incidental historical dimension in Simplicius to an end in itself, i.e., he tries to *teach* the history of philosophy by supplying *names* to go along with the views: Boethus said that one ought to start with physics,⁹ Andronicus with logic.¹⁰ What is of extreme significance for our purpose is that Philoponus does not mention the names of the authority (or authorities) who suggested ethics as the starting point (*phasi de tines*); had Theophrastus been the acknowledged representative of this view, we would have expected to find his name mentioned here.¹¹ As far as we can tell—and Moraux rightly emphasizes the almost total lack of sources—in citing these names Philoponus appears to be still within the boundaries of historical fact, but barely so.

4. With the next generation of Alexandrian scholars, Olympiodorus and his students, the boundary between fact and fiction is transgressed. In Olympiodorus (*fl. ca.* 535), the normative argument of Ammonius, although still present, is relegated to a secondary position, while the focus of the discussion shifts to the historical part, the enumeration of the views held by previous philosophers. Through an extended use of the method of *dihairesis*, Olympiodorus introduces yet a fourth subject as a candidate for the starting point, mathematics. This is done apparently in order to have all branches of philosophy represented: ethics (substituting for all branches of practical philosophy), logic, and two of the three branches of theoretical philosophy—physics and mathematics—with the obvious omission of metaphysics, which, as the goal, can never be a starting point. As a justification for his (surreptitious) introduction of mathematics into the list, Olympiodorus adduces for the first time the ingenious argument that the people who held the view that mathematics ought to be the starting point took their cue from the inscription on Plato's museum in the Academy, *ageōmetrētos mēdeis eisitō*.¹² There is nothing historical in this, in the sense that the intention of this alleged inscription was not to prescribe a progression in philosophical instruction from mathematics through the other subjects to metaphysics according to the Aristotelian curriculum; Olympiodorus' purpose is rather to bring Plato, in accordance with the Neoplatonic dogma of the harmony between Plato and Aristotle, into the mainstream of Aristotelian discussion about the instruction of the philosophical sciences.

5. Elias (*fl. ca.* 550) represents the last stage of the process as it is extant in Greek, but not the final stage. The presentation of the historical part becomes extremely elaborate and schematization reaches new heights: Elias even talks about a *disagreement* (*diaphōnia*) among the ancients on the subject, and repeats the four branches of philosophy established by Olympiodorus as the starting points. But Olympiodorus had not provided any names, and for ethics and mathematics no names had *ever* been provided in the extant Alexandrian introductions in Greek. Elias obliges: he repeats the names of Boethus and Andronicus for physics and logic and, following the suggestion of Olympiodorus' quotation of the *ageōmetrētos* inscription on the Platonic museum, he supplies Platonists for the rest: "among the Platonists, some said one ought to start with ethics, others with mathematics." He supports his association of Platonists with ethics as the starting point by referring to the *Phaedo* (67B: "It is unlawful for the impure to attain to the pure,") and a Hippocratic aphorism (2.10: "The more you feed impure bodies, the more you harm them, providing fuel to the unhealthy state of their humors").¹³ What is significant—and surprising—here is that he proposes some Platonists as the representatives of the view that one ought to start with ethics. As in the case of Philoponus, had Theophrastus been the accepted representative

of this view, Elias could hardly have failed to mention him in this context. Elias then proceeds with the normative argument about the recommended progression, morals, logic, ethics.¹⁴

The further development in Greek of this schematized and idealized history of philosophy is not extant. We can pick up the thread, however, from Syriac and ultimately Arabic sources.

6. Chronologically, the next stage is hinted at by a passage of Paulus Persa, a younger contemporary of Elias, writing in Pahlavi or possibly Syriac. In his introduction to the philosophy of Aristotle, preserved in an Arabic translation quoted in extenso by Miskawayh,¹⁵ he says that one (or some) of the teachers of Aristotle's books (*ba'du aṣḥāb Aristūṭālīs min mudarrisī kutubihi*) maintained that one should start with ethics.¹⁶ This indicates that the amplification of Olympiodorus' schema by Elias was not satisfactory. His attribution of both ethics and mathematics as starting points to Platonists apparently did not meet with general acceptance by Aristotelians; they could grant Platonists mathematics but not ethics. Therefore, another candidate had to be found as representative of ethics as the starting point, and Paulus Persa's testimony indicates that this candidate was found—properly—among the teachers of Aristotle's books.

7. The text of Paulus Persa as we have it mentions no specific name, but a name there was, and it was available either in an earlier form of Paulus' text or in another introduction to Aristotle which was the source of Paulus, possibly David.¹⁷ The name appears in Fārābī's essay mentioned at the beginning of this article:

The science with which one ought to start before studying philosophy:

- a) The Platonists are of the opinion that it is geometry. . . .
- b) The followers of Theophrastus/Adrastus are of the opinion that one ought to start with the science of improving morals,¹⁸ because whoever does not improve his own morals cannot learn anything properly. Plato attests to this when he says, "Whoever is not clear and pure should not approach the clean and pure" [*Phaedo* 67B]; and Hippocrates also when he says, "Whenever you feed impure bodies you make them worse" [*Aphorisms* 2.10].
- c) Boethus of Sidon is of the opinion that the starting point is physics. . . .
- d) Andronicus the student [sic] of Boethus is of the opinion that one ought to start with logic. . . .¹⁹

It is clear that Fārābī is reproducing here a text—complete with the quotations from Plato and Hippocrates—that is very close to the last stage of the extant Greek tradition, that of Elias. The only difference lies in the name to which the view that ethics is the starting point is ascribed. The transliteration of the name in Arabic, however, is not unambiguous. Schmöld-

ers and the Cairo edition have *'dfrsts*, Dieterici *'wfrsts*, which are not the usual transliterations of Theophrastus, *ῥωfrsts*. Nevertheless, both Schmölders and Dieterici transcribe the name as Theophrastus and offer no comments for their assumed identification.²⁰

The assumption is gratuitous. The name could be Theophrastus, but it is highly improbable; another name, such as that of Adrastus, is much more likely. Among the reasons that can be given,

- a. The least significant one is the irregularity in the transliteration. Greek names are notoriously misspelled in Arabic, and without access to the readings in the manuscripts of Fārābī's essay, it is fruitless to argue the point either way beyond registering that the name is *not* uniformly and incontrovertibly that of Theophrastus.
- b. More cogent is the failure of Philoponus and Elias to mention Theophrastus despite the fact that they do provide the names of the representatives of the views about the starting points.
- c. Elias, in particular, not only does not mention Theophrastus but expressly identifies "some Platonists" as those who held that one ought to start with ethics. Had the name of Theophrastus been generally associated with ethics as the starting point at his time, it is difficult to see how Elias could have disregarded it.
- d. The association of ethics as starting point with a philosopher's name did not take place either in the Syriac or Arabic tradition; it was obviously made in Greek circles in Alexandria and must reflect developments after the time of Elias. The Greek Alexandrian scholars, though prone to schematize the history of philosophy, nevertheless knew their sources and were accordingly restricted in the extent to which they could reformulate and at times extrapolate from known facts. The limits within which they could move, the direction which they tended toward, and the way in which they proceeded is indicated by the following. Starting with Elias, and doubtless continuing after him, a tendency is perceived to locate the disagreement about the starting point among *Aristotelian* philosophers. This is evident from Elias' attempt to "Aristotelianize" the Platonists, in keeping with the Neoplatonic spirit of the congruence of Aristotelian and Platonic philosophies. After he introduces Platonists as the supporters of mathematics and ethics as starting points, he justifies, or excuses, their position about mathematics (retrospectively untenable from his Aristotelian point of view) by claiming it to have been due to ignorance of logic (dialectic) and implicitly reinterpreting it to mean logic rather than mathematics: "Had dialectic been invented in Plato's time, Plato would not have inscribed *ageōmetrētos mēdeis eisitō* over his museum since he too pointed out the power of dialectic in the *Sophist* [*leg. Parmenides* 135D] when he says, 'Submit yourself, while you are still young, to a training in what many call idle talk [*adoleschia*]. Otherwise, the truth will escape you.' Plato here calls withdrawal from concrete matters 'idle

talk,' that is, logic."²¹ The Platonists are thus excused and brought into line with the Aristotelian tradition by being made to support, despite themselves, logic as the starting point. This being the new direction the *pothen arkteon* argument was taking after Elias, the Alexandrian scholars could not very well speak both of a disagreement among *Aristotelian* philosophers about the starting point of Aristotle's philosophy *and* maintain that the opinion of Theophrastus—Aristotle's student, comrade, and successor—was disputed by much later scholars like Boethus and Andronicus. If Theophrastus said it, then this must also have been, the argument would have run, Aristotle's position. Theophrastus was too close to Aristotle to be an acceptable candidate to have foisted upon him a sharp divergence from his master's opinion. If Platonists could be brought into line to support what Elias considers the true Aristotelian position, logic as the starting point, it is difficult to imagine how Theophrastus, second only to Aristotle himself, could have been proposed as the dissident voice in favor of ethics.

- e. In this new context of the argument, an Aristotelian had to be found who would be far enough removed from the master to justify the disagreement, but who would command considerable respect and belong to the same category as Andronicus and Boethus to warrant mention alongside them. Adrastus of Aphrodisias (second century A.D.)²² is as likely a candidate as any.

8. The final stage of the development of the *pothen arkteon* argument is witnessed in the commentary on the *Categories* by Ibn at-Tayyib (d. 1043), arguably the last Aristotelian commentator in the grand Alexandrian tradition:

The great ancient philosophers disagreed about the starting point of studying philosophy.

- a) One group, whose leader was Plato, claimed that the starting point must be mathematics. . . .
- b) Another group, whose leader was Theophrastus, claimed that a beginning ought to be made with ethics. . . .
- c) Another group, whose leader was Boethus, claimed that the starting point must be physics. . . .
- d) Another group, whose leader was Andronicus, the student of Boethus [sic], claimed that the beginning must be made with logic. . . .²³

Apparently the same source used by Fārābī was also later drawn upon by Ibn at-Tayyib. In the unique manuscript containing the work, the name is given this time clearly as Theophrastus. By the time Ibn at-Tayyib was writing, however, the name of Theophrastus would be far more easily recognizable than that of Adrastus or somebody equally less well known in the Arabic tradition.

Regardless of whether we prefer Adrastus, Theophrastus, or somebody else, the fact remains that the association of a specific name with ethics as the *pothen arkteon* of philosophical studies is a post-Elías, late sixth-century fabrication in Alexandrian scholarship, a fabrication that is totally consistent with the scholastic tendency in this school to schematize and idealize the history of philosophy. The very question of *pothen arkteon*, in the terms in which it was discussed by the Alexandrians, is their own creation; it may be slightly anachronistic—Aristotle's *E.N.* 1095b4-8 notwithstanding—to assume that it was even posed, let alone answered, in those terms in Theophrastus' time. Nevertheless, Theophrastus may well have held that one ought to start with the study of philosophical ethics or with "prephilosophical morality," but we still need to find the evidence for this;²⁴ the texts of Fārābī and Ibn al-Ṭayyib attest not to the view of Theophrastus, but rather to an aspect of tendentiousness in the Alexandrian retelling of the history of philosophy.

NOTES

1. For an analysis tracing the alterations undergone by a Greek text in Arabic transmission see H.H. Biesterfeldt and D. Gutas, "The Malady of Love," *Journal of the American Oriental Society* 104 (1984) 21-55; for the development of a tendentious history of philosophy in late Alexandrian Aristotelianism see my "Paul the Persian on the Classification of the Parts of Aristotle's Philosophy: A Milestone between Alexandria and Bagdād," *Der Islam* 60 (1983) 255-60 and Diagram VI; for both see my "The Spurious and the Authentic in the Arabic Lives of Aristotle," *Pseudo-Aristotle in the Middle Ages*, ed. by J. Kraye, W.F. Ryan, and C.B. Schmitt (Warburg Institute Surveys XI, forthcoming), and the article on Theophrastus in this volume.
2. The text is transliterated and translated in W.W. Fortenbaugh, *Quellen zur Ethik Theophrasts* (Amsterdam 1984) 31 (text L34) and 198 (on L34).
3. These introductions are briefly discussed by I. Düring, *Aristotle in the Ancient Biographical Tradition* (Göteborg 1957) 444-50, and L.G. Westerink, *Anonymous Prolegomena to Platonic Philosophy* (Amsterdam 1962) xxvi-xxvii.
4. P. Moraux, *Der Aristotelismus bei den Griechen, I* (Berlin 1973) 79. In order to avoid misunderstanding, I wish to emphasize that I am talking here only about the formal *pothen arkteon* argument as a prolegomenon to the study of Aristotle, as developed by the Aristotelian professors and set forth below, not about general discussions about the subject with which philosophical speculation or training ought to start. Such general discussions go at least as far back as Aristotle himself (see the last paragraph of this article) and were engaged in, in addition to the Peripatetics, by representatives of all major schools of philosophy, Epicureans, Stoics, and Sceptics. See the brief and informative account by Sextus Empiricus, *Adversus Mathematicos* 7.1-24 (= *Adversus Dogmaticos* 1.1-24). For Chrysippus see also *SVF* 2.42-44 (I am grateful to Professor A.A. Long for these references).
5. The term is Moraux's: "vorphilosophische Sittlichkeit," *Aristotelismus I* 79.
6. Ammonius, *In Cat.* (CIAG 4.4) 5.31-6.8.

7. Simplicius, *In Cat.* (CIAG 8) 5.3-6.5
8. See the discussion in note 18 below.
9. Scholarch of the Peripatos in Athens in the first century B.C. and student of Andronicus. See Moraux *Aristotelismus I* 143-46.
10. Scholarch of the Peripatos in Athens ca. 80-78 B.C. See Moraux *Aristotelismus I* 58, 79.
11. Philoponus, *In Cat.* (CIAG 13.1) 5.15-33.
12. Olympiodorus, *Proleg. in Cat.* (CIAG 12.1) 8.29-9.13.
13. Elias, *In Cat.* (CIAG 18.1) 117.15-118.24.
14. Elias, *In Cat.* 118.25-119.25.
15. See my "Paul the Persian," 238-44.
16. *K. as-Sa'āda li-Ibn Miskawayh fī falsafat al-ahlāq*, ed. by 'Alī at-Tūbjī (Cairo 1917) 71.14-15. The text quoted above follows the reading of the MS, Cairo, Dār al-Kutub, *Hikma* 6M, f. 217v; the printed version is incorrect.
17. See my "Paul the Persian," 245-46. It is to be noted (p. 255) that in another work, the *Ḥṣā' al-'ulūm* (*The Enumeration of the Sciences*), Fārābī showed great dependence on Paulus Persa.
18. It is to be noted that Fārābī here speaks of the *science* of improving morals ('ilm *islāh al-ahlāq*), i.e., of philosophical ethics, not of "improving morals," which would be the "prephilosophical morality," ("Charakterverbesserung, d.h. die Erziehung," Fortenbaugh 198 on L34). In the second, normative part of the argument Fārābī mentions, following the Alexandrians, improving morals only (*islāh al-ahlāq*).
19. Text in F.A. Schmölders, *Documenta Philosophiae Arabum* (Bonn 1836) 7 = Fr. Dieterici, *Alfārābī's philosophische Abhandlungen* (Leiden 1890) 52 = *Mabādī' al-falsafa al-qadima* (Cairo, Al-Maktaba as-Salafiya 1910) 11; translation in Fr. Dieterici, *Alfārābī's philosophische Abhandlungen* (Leiden 1892) 87-88 = Fortenbaugh 198 on L34. The text of paragraphs (a), (c), and (d) omitted in the translation above reproduces the arguments of the Alexandrians. Following this historical part of the argument, Fārābī continues with the normative recommendation of Ammonius, first morals and then logic.
20. Schmölders 21, Dieterici (translation) 87. Despite his learned comments on the general subject (pp. 64-65), Schmölders does not discuss the name. Dieterici (translation, p. 218) simply refers the reader to Schmölders.
21. Elias, *In Cat.* 119.3-8.
22. See *RE* 1 (1893) 416-17, "Adrastus (7)"; P. Moraux, *Der Aristotelismus bei den Griechen, II* (Berlin 1984) 294-95.
23. Ibn at-Tayyib, *Commentary on the Categories*, MS Cairo, Dār al-Kutub, *Hikma* 1M, ff. 5v-6r.
24. If the name in the source used by Fārābī was indeed Adrastus, the reason for his selection by the scholars after Elias may well be that Adrastus wrote a historical and literary commentary on the ethical books of Aristotle and Theophrastus. See Athenaeus 15 673E-F = text S48 in Fortenbaugh 14, and the discussion in Moraux *Aristotelismus II* 323-30.

5

Theophrastus and Hypothetical Syllogistic

Jonathan Barnes

I

In *APr* 1.44 Aristotle considers “arguments on the basis of a hypothesis.” He deals first with arguments that are “agreed to by way of a compact,” and then with those that “reach their conclusion by way of the impossible.” The chapter ends with a promise: “Many other arguments reach their conclusion on the basis of a hypothesis. We should consider them and mark them out clearly. We shall say later what varieties of them there are and in how many ways arguments can rest on a hypothesis” (*APr* 50a39-b2).

Alexander of Aphrodisias (*In APr* 389.31-390.9)¹ comments on that passage as follows:

390.1 Having talked about arguments on the basis of an agreement and arguments by *reductio ad impossibile*, he says that “many other arguments reach their conclusion on the basis of a hypothesis.” He postpones discussion of them, as though intending to deal with them more carefully; but no book of his on the subject is in circulation. Theophrastus, however, refers to them in his own *Analytics*—and so do Eudemus and some others of Aristotle’s associates.

.5 Aristotle presumably has in mind those arguments which proceed by way of a continuous proposition (or a connected proposition, as it is also called) together with the additional assumption, and those which proceed by way of a separative or disjunctive proposition—and perhaps also those which proceed by way of a negated conjunction, if they are indeed different from the ones already mentioned.²

In addition to those we have mentioned, there will also be arguments on the basis of proportion and those which they call “qualitative” (i.e., arguments from what is more so or less so or equally so) and whatever other varieties of arguments based on a hypothesis³ there are (they have been discussed elsewhere).

Those paragraphs are of some importance for the history of logic: the present paper is a commentary upon them.

II

Aristotle undertook to discuss the "other arguments on the basis of a hypothesis." Alexander cautiously observes that no Aristotelian treatise on the topic "is in circulation"; Philoponus says that "Aristotle has taught us nothing about the subject" (*In APr* 242.15), Boethius that "nothing was written on the matter by Aristotle" (*Hyp. syll.* 1.1.3). A curious passage in Al-Fārābī's commentary on the *De interpretatione* contradicts those judgments.⁴ But whatever the precise sense of the passage may be, Al-Fārābī's value as a witness is slight, and we may reasonably assume that Aristotle wrote nothing on hypothetical syllogisms apart from the few paragraphs in *APr*.

III

By Alexander's account, Theophrastus, Eudemus, "and some others of Aristotle's associates" considered the arguments which Aristotle had passed over. Philoponus echoes the report, adding that the Stoics also wrote on the subject (*In APr* 242.19-21). Boethius mentions only Theophrastus and Eudemus (*Hyp. syll.* 1.1.3). Al-Fārābī also drops the reference to Aristotle's "other associates," but, like Philoponus, he adverts to the Stoics.

The identity of those "other associates" is uncertain. Boethus of Sidon, the successor of Andronicus of Rhodes, devoted much attention to logic and is known to have discussed the relationship between hypothetical arguments and Aristotle's categorical syllogistic (Galen, *Inst. log.* 7.2). Ariston of Alexandria "and several of the younger Peripatetics" are said to have studied logic (Apuleius, *De int.* 193.16), and they may have touched upon hypothetical syllogistic.⁵ But those men cannot be in Alexander's mind: he is referring to the older Peripatetics, who might properly be called "associates" of Aristotle, and not to the nascent Peripatetics of the first century B.C.⁶

The only early Peripatetics, apart from Eudemus and Theophrastus, whose names are connected with logical studies are Phaenias of Eresus and Strato of Lampsacus. Phaenias is said to have written an *Analytics* (Philoponus, *In Cat.* 7.20); but nothing is known about the work. Strato produced a few books on logical matters (DL 5.59-60). None of their titles mentions hypothetical syllogistic (or categorical syllogistic); but the work *On the More and Less* finds an echo in Alexander's description of "qualitative" hypothetical syllogisms and conceivably dealt with them.

On Eudemus we are better informed. He, too, wrote an *Analytics*, and his name is regularly coupled with that of Theophrastus' in ancient references to early Peripatetic logic. Boethius asserts that his treatment of hypothetical syllogistic was fuller than that of Theophrastus (*Hyp. syll.* 1.1.3). But only one text (1.2.5) ascribes a view on the subject to Eudemus without at the same time ascribing it to Theophrastus.

In what follows I shall, for the sake of convenience, speak exclusively of Theophrastus, ignoring Eudemus and "the others." Alexander appears to give Theophrastus a certain preeminence, and the most detailed information we possess about hypothetical logic in the Peripatos is connected specifically with him (Alexander, *In APr* 325.33-328.6).

IV

How extensive was Theophrastus' work on hypothetical syllogisms? Alexander says that he "refers to" (*mnēmoneuei*) them in his *Analytics*. Elsewhere Alexander cites the first book of Theophrastus' *Prior Analytics* (*In APr* 326.21-2). It was Theophrastus' general practice, when writing on a subject already treated by Aristotle, to touch lightly on those aspects which Aristotle had discussed and to follow out in some detail those aspects which Aristotle had ignored (Boethius, *In De int.* 12.3-16). No doubt his *Analytics*, at the place corresponding to Aristotle's *APr* 50a39-b2, contained some moderately expansive account of hypothetical syllogisms.

Alexander does not refer to any other work of Theophrastus' in connection with hypothetical arguments. The known titles of Theophrastus' logical writings do not include "On Hypothetical Syllogisms" or anything similar. Alexander's use of the verb *refer to* perhaps suggests a treatment of relatively slight proportions.

That suggestion is supported by a passage from Boethius. When he began his study of hypothetical arguments, Boethius says, he discovered no Latin and few Greek treatments of the subject. Aristotle had written nothing. "Theophrastus, a man of universal learning, only pursues the elements (*summas*) of the matter; Eudemus follows a broader path of scholarship, but in such a way that he seems to have, as it were, sown the seed yet not harvested the crop" (*Hyp. syll.* 1.1.3). If Eudemus only sowed the seed and Theophrastus did even less, then Theophrastus did not do much.

Against those deflationary testimonies there stands a passage from Philoponus. He says that "lengthy treatises (*polustichoi pragmateiai*) were written on the subject by Aristotle's pupils—Theophrastus, Eudemus, and the others—and also by the Stoics" (*In APr* 242.18-21). That statement is unequivocal. Scholars customarily dismiss it: Philoponus is mistaken; Theophrastus wrote no "lengthy treatise" on hypothetical syllogistic.⁷ But although

it is easy to imagine ways in which Philoponus might have come to commit such a mistake, his text should be taken more seriously.

Theophrastus is nowhere stated to have written a work entitled "On Hypothetical Syllogisms." But there is no reason to believe that we have a complete list of his logical works. The catalog in Diogenes (5.42-50) is certainly defective, and Philoponus may be referring to a treatise named in no ancient source. Alternatively, Philoponus may have in mind one or more of the books which do appear in Diogenes' list: I shall suggest below that Theophrastus' *Peri anēgmenōn topōn* consisted of an account of one part of hypothetical syllogistic.

Nor is Alexander's evidence formally inconsistent with the testimony of Philoponus. Alexander reports that Theophrastus referred to hypothetical syllogisms in his *Prior Analytics*. That is compatible with the proposition that Theophrastus also discussed hypothetical syllogisms elsewhere.

The text of Boethius is the stumbling-block. But here three things may be said. First, the extent of Boethius' knowledge is uncertain. No doubt he was a conscientious scholar. But there were Latin treatments of hypothetical syllogisms which he had not come across, and there were certainly Greek texts with which he had no acquaintance.⁸ If Boethius discovered no extensive work on hypothetical syllogistic by Theophrastus, it by no means follows that Theophrastus wrote no such work.

Secondly, Boethius' words may be disingenuous. Internal evidence suggests that, in parts at least, *Hyp. syll.* follows Greek sources closely;⁹ external evidence confirms the suggestion—certain correspondences between Boethius' text and passages in an Arabic treatise seem to imply a common Greek original.¹⁰ Boethius' uncharacteristic claim to novelty in *Hyp. syll.* is not wholly convincing: his disparagement of Theophrastus' work may be exaggerated.

Finally, it needs observing that Boethius and Philoponus are not in formal opposition. Philoponus says that Theophrastus wrote at length on hypothetical syllogisms, Boethius that he only pursued the elements of the subject. Lengthy treatises may be elementary—and they may certainly be judged to be elementary. Perhaps Theophrastus wrote at length and Boethius judged—or affected to judge—that his long disquisitions were elementary.

The case against Philoponus is not as strong as scholars have supposed. All the evidence we have about the quantity of Theophrastus' work is formally compatible. I do not assert that Philoponus is to be believed; but I find no sufficient reason for disbelieving him. In any case, even if Philoponus is wrong, Theophrastus may have worked extensively on hypothetical syllogistic. Logic does not take up much space. Aristotle's complex and sophisticated development of assertoric categorical syllogistic occupies no

more than ten pages of the Oxford text. A ten-page treatment of hypothetical syllogisms could well be similarly elaborate.

V

What were the hypothetical syllogisms which Theophrastus discussed? A hypothetical syllogism is an argument at least one of whose premisses is a hypothetical proposition. A proposition is hypothetical if it is a compound of at least two propositions. In modern English the adjective *hypothetical* suggests the notion of conditionality: conditional propositions, of the form "If P, then Q," are indeed hypothetical in the normal ancient sense of that term; but for the ancient logicians disjunctions equally count as hypothetical propositions.¹¹ (The status of conjunctions was disputed.) Here I follow the ancient usage.

Hypothetical syllogistic contrasts with categorical syllogistic, for a syllogism is categorical if all its component propositions are "simple," i.e., if none is a compound of two or more propositions. Modern logicians sometimes identify hypothetical syllogistic with (a part of) the propositional calculus and categorical syllogistic with (a part of) the predicate calculus. That identification is in some ways misleading. When ancient hypothetical syllogistic was rediscovered by Łukasiewicz he advertised it as *Aussagenlogik*: that puff was pardonable in the circumstances, but hypothetical syllogistic no longer needs the efforts of the admen and Łukasiewicz's nomenclature is best abandoned.

VI

Alexander supposes that in *APr* 1.44 Aristotle "has in mind"¹² an exposition of hypothetical syllogistic, and he proceeds to catalog the arguments which Aristotle would have discussed had he kept his promise. Alexander was not in telepathic communication with Aristotle's ghost: how, then, did he know what Aristotle had in mind? Plainly, he inferred Aristotle's intentions from the performance of Aristotle's associates. Observing what arguments Theophrastus had discussed, he reasonably deduced that those were the arguments which Aristotle had intended to discuss. Alexander's catalog of hypothetical syllogisms is thus a list of the contents of Theophrastus' work on hypothetical syllogistic.

Alexander does not state that the arguments he lists were discussed by Theophrastus. Modern scholars have insisted on that fact. They have inferred that Alexander gives us no information about the content of Theophrastus' work.¹³ They are right in what they insist upon. But their inference is fallacious and their conclusion is at odds with Alexander's text. For although

Alexander does not state that his arguments were discussed by Theophrastus, he unequivocally implies that they were. The gist of the passage from Alexander is this: "Aristotle does not discuss the 'many other' hypothetical syllogisms. Theophrastus does. They are the following. . . ." The train of thought is a crass *non sequitur* except on the assumption that the arguments listed by Alexander are the arguments Alexander takes Theophrastus to have discussed. We can affirm with complete confidence that Alexander believed Theophrastus to have discussed the arguments which he catalogs. I see no reason to question his belief. Against the consensus of modern scholars, I share the view of Carl Prantl that in our passage from Alexander's commentary we possess an account of the content of Theophrastus' work on hypothetical syllogistic.¹⁴

VII

Alexander's catalog divides into two sections. The first section (390.3-6) covers what were usually called "mixed" hypothetical syllogisms, i.e., arguments one of whose premisses was not hypothetical but categorical. The text reads as follows:

390.5 Aristotle presumably has in mind those arguments which proceed by way of a continuous proposition (or a connected proposition, as it is also called) together with the additional assumption, and those which proceed by way of a separative or disjunctive proposition—and perhaps also those which proceed by way of a negated conjunction, if they are indeed different from the ones already mentioned.

The repetition of "those which" (*tous te . . . kai tous . . . ē kai tous*) makes it clear that Alexander has three varieties of "mixed" syllogism in mind.¹⁵

The first variety contains a "continuous" or "connected" proposition and an "additional assumption." A continuous or connected proposition is a conditional. *Connected*, *sunēmmenon*, is the standard Stoic term for conditional. Galen says that it is the terminology of the "more recent philosophers"—the "old philosophers" used the phrase *kata sunecheian* (*Inst. log.* 3.3). Since the "old" are more ancient than the "more recent," and the "more recent" go back at least as far as Chrysippus, it is a compelling inference that the "old philosophers" are the early Peripatetics: *suneches* or *kata sunecheian* was Theophrastus' term for "conditional."¹⁶

The "additional assumption" or *proslēpsis* is the categorical premiss of the "mixed" hypothetical syllogism. The term *proslēpsis* is standardly used thus in Stoic logic. Alexander reports that the old philosophers preferred the

word *metalēpsis* (*In Apr* 263.26-264.5); but he adds that “they also use the word *proslēpsis* instead of *metalēpsis*” (264.5-6).

The most general form of hypothetical syllogisms of the first variety can therefore be represented by:

I. If A, then B; but C: therefore D

where “If A, then B” is the continuous or connected proposition and “C” is the additional assumption or *proslēpsis*. Two valid instances of that form are:

1. If P, then Q; but P: therefore Q
2. If P, then Q; but not-Q: therefore not-P

Those two valid schemata later assumed prominence in Stoic logic.

Mixed hypothetical syllogisms of the second variety contain a “separative or disjunctive” premiss as well as the “additional assumption.” *Separative*, *diairetikos*, is the term used by the old philosophers for the propositions which the Stoics called *disjunctive*, *diezeugmenos*, and which modern logicians call *exclusive* disjunctions (Galen, *Inst. log.* 3.3). A separative proposition is true just in case one or the other, but not both, of its components is true.

The most general form of hypothetical syllogisms of the second variety is thus:

II. Either A or B; but C: therefore D

where “Either A or B” is the separative or disjunctive premiss and “C” is again the *proslēpsis*. Two valid instances of that form are:

3. Either P or Q; but P: therefore not-Q
4. Either P or Q; but not-Q: therefore P

Those two schemata also played an important part in Stoic logic.

VIII

Alexander’s description of the third variety of mixed hypotheticals runs thus: “And perhaps also those which proceed by way of a negated conjunction (*dia apophatikēs sumplokēs*).” The terminology is Stoic: a *sumplokē* is a conjunction, *apophatikos* means “negated.” The most general form of this variety of syllogism will therefore be:

III. Not (both A and B); but C: therefore D

A valid instance is:

5. Not (both P and Q); but P: therefore not-Q

And that too is a fundamental schema in Stoic logic.

Alexander’s presentation of III differs from his presentation of I and II: in the case of III he gives no Peripatetic terminology; and he introduces III not by a simple conjunction but by the phrase “and perhaps also” (*ē*

kai).¹⁷ Moreover, he adds a *caveat*: "If they are indeed different from the ones already mentioned."¹⁸

Elsewhere, in the course of arguing that mixed hypothetical syllogisms can in a way be "reduced" to categorical syllogisms, Alexander again casts doubt upon the independence of form III. Having offered "reductions" for arguments of form I (*In APr* 262.32-264.6) and then for form II (264.7-14), he proceeds: "The same holds for arguments involving a negated conjunction—if indeed they are actually different from the forms already discussed and are not the same as those involving conditionals with affirmative antecedents and negated consequents, i.e., 'If A, then not B'" (264.14-17). Alexander thus suggests that "Not (both A and B)" is another way of expressing the conditional "If A, then not B"; so that form III turns out to be a special case of form I.

What Alexander suggests, Galen positively affirms. According to Galen, there are just two kinds of hypotheticals, those which mark a connectedness and those which mark a separateness. Hypothetical propositions, correspondingly, are either conditional or disjunctive (*Inst. log.* 3.1). The same view is defended by Boethius (*Hyp. Syll.* 1.3.4), and the only hypotheticals admitted into Boethius' syllogistic are disjunctions and conditionals.¹⁹

Alexander, Galen, and Boethius are each opposing, implicitly or explicitly, a feature of standard Stoic logic. For the Stoics in effect treated form III as an independent form of mixed hypothetical syllogism. The debate to which these texts pertain may have had a long history, for Boethius may be drawing on Eudemus: his statement that there are only two varieties of hypothetical proposition follows immediately upon a direct citation of Eudemus. In that case, the early Peripatetics will have claimed explicitly that hypothetical syllogistic need concern itself only with forms I and II.

However that may be, Alexander does not give III the same status as I and II. I suggest that his reference to III should be treated as in effect parenthetical.²⁰ Theophrastus discussed forms I and II, but he did not discuss III; Alexander knew that the Stoics gave independent status to form III, and in his parenthesis he left open the possibility that Aristotle had intended to discuss III as well as I and II.

IX

The second section (390.6-9) of Alexander's catalog refers explicitly to two types of hypothetical argument.

Arguments of the second type are "those which they call 'qualitative' (*kata poiôtēta*).²¹ The obscure phrase which "they" use is also used by Aristotle (*APr* 45b17), and "they" are surely Theophrastus, Eudemus, and Co. The phrase is glossed as "arguments from what is more so or less so or equally

so.” Earlier Alexander had explained that “arguments are called ‘qualitative’ if they prove from what is more so or less so or equally so: ‘Since this is the case, what is similar (or what is more so, or what is less so) follows the quality’” (*In APr* 324.19-22). The function of the “since” clause is to give a schematic representation of qualitative arguments, thus: “Since such-and-such has a given property, then what is equally (or more, or less) possessed of that property follows the quality [i.e., also possesses the property].” Alexander proceeds to illustrate qualitative argumentation: “If what would seem to be more self-sufficient with regard to happiness is not self-sufficient, then what is less so than it is not self-sufficient; but health, which would seem to be more self-sufficient than wealth with regard to happiness, is not self-sufficient; nor, therefore, is wealth” (*In APr* 324.26-9). Some qualitative arguments “from what is more so” thus contain a universal premiss of the form “If x is more F than y , and x is not F , then y is not F ”; from that premiss and two singular propositions—“ a is more F than b ,” “ a is not F ”—they infer the singular conclusion “ b is not F .”

Arguments of that sort are discussed in Aristotle’s *Topics*. Their general form can be represented, somewhat cumbrously, as follows:

IV. For any x and any y , if $R(Fx, Fy)$ and $\pm Fx$, then $\pm Fy$; but $R(Fa, Fb)$ and $\pm Fa$: therefore $\pm Fb$

Here “ R ” is a variable the possible substituends for which are “more”, “less”, and “equally”; and “ $\pm P$ ” can be replaced either by “ P ” or by “not- P .” In what sense is IV a form of hypothetical syllogism? According to Alexander, “arguments from what is more so and equally so and less so also count among arguments on the basis of a hypothesis; for in them one thing is hypothesized and another assumed in variant form (*metalambanetai*)” (*In APr* 265.30-1). Thus Alexander construes the universal premiss in IV as a hypothetical proposition.

X

Before mentioning qualitative syllogisms Alexander refers to arguments “on the basis of a proportion” (*ex analogias*). Some scholars suppose him to mean arguments of the general form:

V. If A , then B ; if C , then D : therefore if E , then F

For Theophrastus is reported to have named arguments of that form hypotheticals *kata analogian* (*In APr* 326.9). But Alexander’s own term for V is *di’ holōn hypothetikoi*, “thoroughly hypothetical,” arguments; and it is most unlikely that in our passage he would, without explanation, designate V by a variant on a nomenclature which he never elsewhere uses *in propria persona*.

At *In APr.* 397.25-398.15, Alexander analyzes Aristotle's argument (*APr* 51b10-27) that "He is not-white" is not the contradictory of "He is white." The argument goes thus: "He is not-white" stands to "He is white" as "He is capable of not walking" stands to "He is capable of walking"; but "He is capable of not walking" is not the contradictory of "He is capable of walking": therefore "He is not-white" is not the contradictory of "He is white." Alexander comments that "the proof is by way of proportion (*di' analogias*)—and this too is a hypothetical proof" (*In APr* 397.27). The general form of the argument is:

VI. As X is to Y, so Z is to W; but X is R to Y: therefore Z is R to W
There can be no doubt that it is arguments of the form VI which Alexander means to designate in our passage by the phrase *ex analogias*—they are arguments relying on an *analogia*, a ratio or proportion.²¹

XI

Finally, Alexander refers to "whatever other varieties of arguments based on a hypothesis there may be."²² We know of one form of hypothetical syllogism which Theophrastus discussed and which has not yet been mentioned by Alexander in our passage. That is the "thoroughly hypothetical" form—form V. It would be strange were form V ignored in our passage, and it seems safe to infer that it is one of the "other varieties" of hypothetical syllogism to which Alexander generally alludes. Alexander himself has said something about form V at *In APr* 326.8-328.7. It is natural to construe "elsewhere" as a reference to those pages.

XII

The preceding paragraphs have determined which forms of hypothetical syllogism were discussed by Theophrastus and his Peripatetic associates. The catalog is not long, but it includes several important forms of argument to which Aristotle had paid no official attention. What exactly did Theophrastus say about those argument forms?

The question can be answered with confidence for only one of the six forms. Alexander informs us at some length of the way in which Theophrastus treated arguments of form V or wholly hypothetical syllogisms (*In APr* 326.8-328.7). It may be that we also know something about Theophrastus' treatment of qualitative syllogisms, arguments of form IV. The Florentine logical papyrus (PSI 1095) contains a brief fragment of what was evidently a comprehensive, formal, and systematic discussion of at least some varieties of qualitative syllogism. The papyrus text is anonymous; but it is evidently of Peripatetic origin. If it would be rash to ascribe the text to Theophrastus

himself, it is nonetheless plausible to suppose that it derives ultimately from a work by one of the early Peripatetic logicians—perhaps from Theophrastus' treatise *Peri anēgmenōn topōn*.

Here I shall not analyze those two texts. Instead, I turn to forms I and II. Certain arguments of those forms came to occupy a fundamental position inside Stoic logic: in fact, schemata 1-4 represent the first four of Chrysippus' five "indemonstrables." Theophrastus' treatment of the schemata is thus of peculiar historical interest; for we cannot help but wonder if the Peripatetics anticipated and informed the logical studies of the Stoa.

XIII

We possess no information whatsoever about Theophrastus' treatment of forms I and II. A prudent scholar would stop there. But where evidence is lacking, speculation offers its seductive hand.

There was a distinctively Peripatetic way of doing formal logic, an approach familiar from Aristotle's account of categorical syllogistic, visible in the brief remains of Theophrastus' treatment of wholly hypothetical arguments, and exhibited at length in the works of Boethius, whose logic was fundamentally Peripatetic. The main feature of that approach is its use of the method of exhaustive survey: a general form of argument is isolated; its various subforms are classified; and each possible instance of those subforms is examined *seriatim*, it being determined whether the instance is valid or invalid. If we hypothesize that Theophrastus followed that approach in his study of forms I and II, we can apprehend with some accuracy what he said on the subject.

The hypothesis is speculative, but the speculation is not mere whimsy. It allows us to reconstruct a paraphrase of part of Theophrastus' lost discussion of forms I and II. The next section presents a paraphrase of Theophrastus' treatment of I. A parallel paraphrase for II can readily be produced.

XIV

Arguments by way of a continuous proposition and an additional assumption have the general form:

I. If A, then B; but C: therefore D

Just as, in a categorical syllogism, the two premisses must be linked by a middle term, so in a hypothetical syllogism of form I the additional assumption must be linked to one of the terms of the hypothetical premiss; that is, C must be either A or not-A or B or not-B. (That is why C is called a *proslēpsis* or a *metalēpsis*: one of the terms already mentioned is taken again [*pros-*] or taken in a changed guise [*meta-*].)

Thus there will be two "figures" under form I, depending on whether the additional assumption takes up the antecedent or the consequent of the hypothetical premiss. We may represent those two forms by:

X. If $\pm P$, then $\pm Q$; $\pm P$

Y. If $\pm P$, then $\pm Q$; $\pm Q$

(The notation " $\pm P$ " indicates that we may have either P or its negation, not- P .)

Each figure generates a number of premiss pairs (*suzugiai*). The possible pairings in the first figure, X, are these:

- i. If P , then Q ; P
- ii. If P , then Q ; not- P
- iii. If not- P , then Q ; P
- iv. If not- P , then Q ; not- P
- v. If P , then not- Q ; P
- vi. If P , then not- Q ; not- P
- vii. If not- P , then not- Q ; P
- viii. If not- P , then not- Q ; not- P

The second figure, Y, generates a similar eight pairings:

- ix. If P , then Q ; Q
- x. If P , then Q ; not- Q
- xi. If not- P , then Q ; Q
- xii. If not- P , then Q ; not- Q
- xiii. If P , then not- Q ; Q
- xiv. If P , then not- Q ; not- Q
- xv. If not- P , then not- Q ; Q
- xvi. If not- P , then not- Q ; not- Q

Pairing i in the first figure yields the valid syllogism:

1. If P , then Q ; P : therefore Q

Pairing ii admits no valid conclusion, as Aristotle has already observed.²³

Pairings iv, v, and viii are analogous to pairing i: in each case there is a valid syllogism (to Q , not- Q , and not- Q respectively). Pairings iii, vi, and vii are analogous to pairing ii: they admit no valid conclusion.

As for the second figure, pairing ix admits no valid conclusion; but pairing x yields:

2. If P , then Q ; not- Q : therefore not- P .

Again, pairings xi, xiv, and xvi are analogous to ix and give no syllogism, while pairings xii, xiii, and xv, being analogous to x, admit valid syllogisms.

Thus form I contains two figures; each figure contains eight pairings; and of each set of eight pairings four yield, and four do not yield, valid hypothetical syllogisms.

XV

Theophrastus, I suggest, said all that—if not in those words or in that order. Did he say more? Surely he did. In categorical syllogistic some syllogisms are “perfect,” others “imperfect,” and imperfect syllogisms are perfected or justified by reduction to perfect syllogisms. Theophrastus’ treatment of wholly hypothetical syllogisms included such a reduction (Alexander, *In Apr* 327.33-35). He will surely have wondered if a similar reduction is not possible for hypothetical syllogisms of form I.

It is, and evidently so. If syllogism 1 is taken as perfect, the seven remaining valid arguments can be perfected or justified by reference to 1. Consider, for example, argument 2. Theophrastus might have argued thus: “If P, then Q, and also not-Q, then not-P. For suppose that not-P is not the case. Then P is the case. From P and the hypothetical premiss we infer Q, by syllogism 1. But that is impossible, since not-Q is given; hence not-P.” Set out more formally, the reduction runs thus:

- | | |
|------------------|-----------------------|
| (A) If P, then Q | Assumption |
| (B) Not-Q | Assumption |
| (C) P | Hypothesis |
| (D) Q | From (A), (C), by (1) |
| (E) Q and not-Q | From (B), (D) |
| (F) Not-P | <i>reductio</i> |

Similar reductions can easily be performed for the remaining six valid syllogisms.

No ancient author ascribes any such reductions to Theophrastus, but they are found in Boethius and are clearly Aristotelian in spirit. It does not seem temerarious to conjecture that Theophrastus advanced them. A singular text in Galen (*Inst. log.* 8.2) observes that of the five schemata 1-5—the five “indemonstrables” of Chrysippus’ logic—four are primitive but one, schema 2, requires proof. According to Galen, then, argument 2 can be “reduced.” He surely has in mind the reduction of 2 to 1 which I have just rehearsed. He does not name a source. He may, of course, be drawing on a Stoic (not all Stoic logicians accepted the Chrysippean systematization of logic), but he is perhaps more likely to be using a Peripatetic source. Boethus springs to mind. Galen may have drawn his observation from a treatise by Boethus. If so, I guess that Boethus himself was copying the earlier work of Theophrastus.

XVI

What I have just offered is a generous—some will say a risibly prodigal—interpretation of Theophrastus’ contribution to the theory of the hypothetical

sylogism. If Theophrastus did all that, surely he must be regarded as the effective founder of what we misleadingly call Stoic logic?²⁴ The thesis that Theophrastus had a profound influence on the work of Chrysippus and his colleagues presupposes, first, that there was intellectual contact between Theophrastus and the Stoa, and second, that there is a strong connection between the content of Theophrastus' logic and that of Chrysippus' logic.²⁵

The Peripatetics were not intellectual anchorites, nor were they obsessively secretive about their views. The Hellenistic schools were all domiciled in Athens, they worked within a few hundred yards of one another, and pupils moved easily from one school to another. There is no direct evidence in the biographical tradition that the great Stoics "heard" their Peripatetic contemporaries. But it must be thought probable, on general grounds, that they were aware of the views promulgated in the Lyceum. And recent scholarship has argued with some cogency that various aspects of Stoic and Epicurean thought are best understood as reactions against Aristotelian positions.

It seems excessively skeptical to suppose that Chrysippus knew nothing at all about Peripatetic logic. If that is granted, should we not forthwith declare that Theophrastus invented Stoic logic? After all, Chrysippus' greatest contribution to logic was the theory of the five "indemonstrables"—the five basic argument-patterns on which all other syllogisms could allegedly be shown to depend. And the five indemonstrables—i.e., arguments 1-5—had all been discussed by Theophrastus. We might indeed go further. If Theophrastus attempted a reduction of the valid hypothetical forms, and if he showed that argument 2 can be derived from argument 1, then he refuted Chrysippus' theory before Chrysippus had stated it; for the Theophrastean reduction effectively proves that the second of Chrysippus' indemonstrables is superfluous—it can be reduced to the first, and the five indemonstrables become four.

That is hasty. First, a relatively trifling point, it is probably false that Theophrastus discussed *all* Chrysippus' indemonstrables. For he probably did not treat arguments of form III, and hence did not recognize argument 5, the third of Chrysippus' five indemonstrables. If that is so, then at the very least Chrysippus added something to Theophrastus' account.

But Chrysippus certainly did far more than that. Theophrastus may have published a thorough examination of forms I and II; he may have singled out certain syllogisms of those forms as perfect and derived other syllogisms from them. But there is no reason to believe that he regarded his perfect syllogisms as the basis for arguments of *different forms*—that he took argument 1 to be a primitive basis not merely for all syllogisms of form I but also for syllogisms of other forms. Nor is there reason to believe that Theophrastus attempted a unitary theory of hypothetical syllogistic, that he tried to find

a single set of indemonstrables from which all other hypothetical arguments might be derived.

The Peripatetics recognized that arguments come in different forms. They distinguished several types of form, and within each form they systematized and regimented the valid moods. But they did not conceive the notion of a logical system which would include arguments of different types, nor did they attempt a unitary and comprehensive regimentation of valid arguments. Their logic was systematic, rigorous, and formal; but it was piecemeal.

It is here that the originality of Chrysippus lies. His theory collects as its indemonstrable basis argument-forms of different logical types, and it professes to comprehend within a single system all varieties of valid inference. Even if Theophrastus' work was studied by Chrysippus, it can have had at most a superficial influence on his thought: it did not suggest to him his greatest achievement. Theophrastus invented hypothetical syllogistic but he did not invent Stoic logic.²⁶

NOTES

1. The passage is F 29 in A. Graeser, *Die logischen Fragmente des Theophrast* (Berlin/New York 1973), and frag. 33c in L. Repici, *La logica di Teofrasto* (Bologna 1977).
2. Wallies, in the *CIAG* edition, punctuates so as to begin a new sentence with the clause "if they—already mentioned." The result is ungainly and obscure. In my translation I gratefully adopt a suggestion made by David Sedley: his punctuation gives perfect sense and makes better Greek. (It leaves an unpleasant asyndeton. Perhaps we should insert a particle and begin the new sentence at 390.6 with *para de tous*.)
3. I excise *protaseōn* (390.9): the phrase "propositions based on a hypothesis" is strange, and even if it may be allowed as a variant on "hypothetical proposition," it is out of place; Alexander is enumerating types of hypothetical *arguments*, not types of hypothetical *propositions*.
4. The passage is *In De int.* 53 (see F.W. Zimmermann, *Al-Fārābī's Commentary and Short Treatise on Aristotle's de Interpretatione* [Oxford 1981] 45). Professor Dimitri Gutas first drew my attention to certain difficulties in the paragraph and saved me from some serious misconceptions. Then Dr. Fritz Zimmermann, with great generosity, subjected the text to a fresh scrutiny and allowed me to benefit from his learning. He now translates the relevant lines as follows:

[1] Aristotle does not consider the composition of hypothetical propositions in this book at all, though he does slightly in the *Prior Analytics*. [2] The Stoics, i.e. [?] Chrysippus and others of the Stoa, did do so with a vengeance: they exhaustively treated of the subject of hypothetical syllogisms. [3] Similarly, Theophrastus and Eudemus [in the time] after Aristotle. [4] They say that Aristotle wrote books on hypothetical syllogisms. [5] But in his logical writings we find no indication that he produced a separate account of hypothetical syllogisms. [6] That is only found in the commentators' commentaries, [7] who relate them from Theophrastus.

In clause [7], "them" refers to hypothetical syllogisms. In sentence [6], "that" is ambiguous in its reference: the sentence may mean either that *an indication that Aristotle produced a separate account* is found only in the commentaries, or else that *a separate account* is found only in the commentaries. In sentence [4], "they" probably refers specifically to Theophrastus and Eudemus; but its reference may include the Stoics of sentence [2]. Sentence [4] is the singularity in Al-Fārābī's account. Al-Fārābī, unlike Alexander, Philoponus, and Boethius, clearly thought that, in the view of some people, Aristotle had written a separate treatise on hypothetical syllogisms. He may perhaps be relying on some Greek source which we no longer possess, or he may perhaps have misunderstood the passage from Alexander. But even if the former is the case, we can put no weight on Al-Fārābī's report. Zimmermann writes: "First, Fārābī being what he is—intelligent, perverse, ignorant—he is the worst possible kind of witness for a historian. Secondly, Fārābī's Arabic being what it is, it is normally necessary to construe his evidence in the light of his Greek sources in order to know what he means."

5. See Paul Moraux, *Der Aristotelismus bei den Griechen I*, Peripatoi 5 (Berlin 1973) 164-69 (Boethus), 186-92 (Ariston).
6. Mario Mignucci suggests that *hetairos* may mean "follower" rather than "associate," so that Alexander could after all be referring to the resurgent Peripatetics. If he is right, then the logical work which I place in the fourth or third century may actually have been undertaken much later. I do not think that the texts which Mignucci has thus far cited establish his point, and I have not yet come across any passage in which someone whose career did not overlap with *x*'s is unequivocally called a *hetairos* of *x*. But the matter requires further investigation.
7. See, e.g., M. Pohlenz, *Die Stoa* (Göttingen 1949), vol. 2, p. 29; Graeser, pp. 92-93.
8. See L. Obertello, *A.M. Severino Boezio: de hypotheticis syllogismis* (Brescia 1969) 15-66.
9. See G. Striker, "Zur Frage nach den Quellen von Boethius, *de hypotheticis syllogismis*," *AGPh* 55 (1973) 70-75.
10. See M. Maróth, "Die hypothetischen Syllogismen," *Acta Antiqua* 27 (1979) 407-36.
11. See, e.g., Apuleius, *De int.* 177.3-10; Albinus, *Didasc.* p. 158 H; Galen, *Inst. log.* 3.1; Boethius, *Hyp. syll.* 1.1.5, 1.3.2; cf. M.W. Sullivan, *Apuleian Logic* (Amsterdam 1967) 24-30.
12. That, I think, is the sense of *legoi d'an*.
13. See, e.g., I.M. Bocheński, *La logique de Théophraste* (Fribourg 1947) 110; Graeser, p. 93; Repici, p. 143; Maróth, pp. 411-12.
14. C. Prantl, *Geschichte der Logik im Abendlande* (Leipzig 1855), vol. 1, p. 379.
15. Contra Bocheński, pp. 109-10.
16. See Bocheński, p. 108.
17. Cf. M. Frede, *Die stoische Logik* (Göttingen 1974) 18. It might, however, be suggested that Alexander uses only Stoic terminology because on this point Peripatetics and Stoics spoke the same language. As for the Greek word *ē*, it would be easy enough to excise that from the text.
18. See above, note 2.
19. See above, note 11. No doubt this view is connected with the thesis that conjunction is a purely linguistic operation (e.g., Porphyry, *apud* Ammonius, *In De int.* 73.19-33). Inexpert logicians are perennially tempted to suppose that

"P and Q" is not a single compound proposition but a mere list of two propositions, distinguishable only linguistically from "P, Q."

20. That is the best way to make sense of the Greek ϵ . I do not rule out the possibility that the whole clause referring to form III is an interpolation.
21. Alexander apparently takes the first premiss to be a hypothetical proposition (*In APr* 398.15-17); and it can readily be rewritten as a conditional.
22. See above, note 3.
23. See *APr* 57b1-2; *Top.* 167b1-8, 181a22-9.
24. That view was stated by Prantl (above, note 14): it has been dismissed, almost unanimously, by later scholars, but for the wrong reasons.
25. It does not presuppose, what would be foolish, that there were no *other* influences upon Stoic logic. See, in general, Frede, pp. 12-26.
26. This paper was read at a conference on Theophrastus held in Liverpool in March 1983. Earlier drafts had been presented to meetings in Oxford and in London. My audiences were very helpful. I am particularly indebted to Pamela Huby, Mario Mignucci, David Sedley, and Fritz Zimmermann. In addition, I should like to thank Bill Fortenbaugh for his helpful editorial suggestions.

6

Theophrastus on the Limits of Teleology

James G. Lennox

One of the most distinctive features of Aristotle's philosophy of science is its attempt to defend the use of teleological explanations in accounting for a variety of natural phenomena without assuming some sort of consciousness involved in their causation. Such a position attempts to steer a middle course between the Scylla of the reductive materialism of certain pre-Socratic natural philosophers and the Charybdis of a Platonic demiurge. Recent discussions of Aristotle's teleology thus rightly stress its naturalism, and argue that it bears up rather well under philosophical scrutiny.¹ These discussions develop interpretations based on certain paradigmatic uses of teleological explanation in Aristotle, especially those that explain biological generation as for the sake of its end and biological structures as for the sake of some functional contribution to the organism's being or well-being.²

Anyone involved with such an enterprise is aware of certain teleological explanations which place serious roadblocks in the way of a fully naturalistic account of Aristotle's teleology. Four of these types of explanation are:

1. The use of the premise that nature does nothing in vain, but always what is best among the possibilities for each organism.³
2. Explaining some arrangement or structure being as it is, because it is more honorable (*timiōteron*) thus.⁴
3. Explaining a certain kind of organism's existence, or its behavior, as due to the needs or requirements of some other kind.⁵
4. Explaining reproduction as being for the sake of "participating in what is everlasting and divine."⁶

I do not mean to suggest that such explanations are not, once we understand Aristotle's overall project, consistent with those paradigm cases already mentioned. My own view is that they are. What I want to draw attention to in this paper is that at least the first two of these modes of explanation were already bothering Aristotle's friend and successor, Theo-

phrastus. That is, there is nothing peculiar to our contemporary way of looking at these explanations which makes them seem problematic. They appeared equally so to someone as close to their source as anyone could be, as I believe the last chapter of Theophrastus' *Metaphysics* "fragment" demonstrates. Section II examines Theophrastus' worries about Aristotle's use of the first sort of explanatory pattern, and section III examines his qualms about the second.

I

A provocative beginning can be made by drawing attention to a current controversy in evolutionary theory. A popular explanatory strategy among orthodox neo-Darwinians is to construct a design or "engineering" model of the optimal adaptive strategy for dealing with a certain niche, given certain assumptions about the functional requirements of the organism in question. This model is then compared with the actual structures of the species or genus in question. If the fit between model and structure is a good one, that is taken as presumptive evidence in favor of the hypothesis that the structure is an adaptation, a product of selection for that niche.⁷

Such a strategy has certain inherent dangers. To mention three: First, we nearly always have prior knowledge of the actual structure for which we are developing an optimal design. This leads to the ever-present danger of allowing this knowledge to bias the construction of the model in the direction of the actual. Second, there is no guarantee that a good fit between model and structure tells us anything about its causation. We require independent methods of judging whether a structure is a product of selection, and such methods are hard to come by. Finally, there is such an array of possible subsidiary hypotheses available in evolutionary theory that one might be tempted to bring a rough fit into neat alignment with the real world by invoking a few of these in an *ad hoc* manner; an epicycle here, a change in diameter there, so to speak.⁸ None of these problems shows that the use of optimality models will necessarily lead to such methodological pitfalls, but they do show that the dangers are especially great and the excesses especially tempting.⁹

Theophrastus is not, of course, concerned with finding criteria for testing claims about natural selection. But since it can be said without anachronism that Aristotle made vigorous use of optimal design strategies in his explanations of biological structures and behavior, it is legitimate to wonder whether Theophrastus' remarks about final causality in *Metaphysics* 9 are concerned with issues about the scope and legitimacy of such explanations. It is my hypothesis that that is indeed one of his principal concerns.

Twice during this discussion Theophrastus tells us what he is attempting to do. Here is the second of those manifestos:

We must attempt to find a certain limit (*horos*) with respect to those things which are for the sake of something and which have an impulse toward what is better, both in natural things and in the entire cosmos (11b25–7).¹⁰

What we take our task to be here depends on how we interpret the notion of a *horos*. Antecedently, it might mean either that which all teleological processes tend toward (so that our task would be to determine what sorts of things can legitimately be considered goals), or some limitation on the legitimate range of teleology (in which case our task would be to find conditions under which such explanations would be legitimate). The way to determine this issue is to examine carefully the cases of explanation which Theophrastus finds troubling. By so doing we ought to gain some insight into what it is he is looking for.

There is an important limitation on this task, dictated by the nature of the text we are working with. The whole of Theophrastus' *Metaphysics* has, as Ross notes in his introduction,¹¹ all the marks of an *aporetic* text, akin to *Metaphysics Beta* of his teacher. It is thus designed to raise problems in need of investigation, and is not to be read as a positive investigation, driving toward a solution to those problems. Nonetheless, this should not be taken to mean the discussion will be a mere logical exercise. One normally raises *aporiae* that do present legitimate blockages to theoretical advance. While it is unlikely that we shall learn much about Theophrastus' considered views on the nature of teleology from this discussion, we shall learn a good deal about the sorts of teleological explanations that he found problematic.

It is also true that we inherit a legitimate problem in this respect from Aristotle. There are texts which seem to tell us that certain ranges of phenomena are outside the scope of teleology,¹² and texts within the scientific works, both biological and nonbiological, in which teleological explanations are virtually absent.¹³ And yet his few attempts to characterize the nature of such explanations make it difficult to give a general account of how one is to determine whether some phenomenon must be accounted for teleologically.¹⁴

I propose, then, that we interpret Theophrastus' call for the setting of a *horos* on those things that are for the sake of something as a call for an explicit account of the conditions under which teleological explanations are and are not appropriate. The test of this proposal will be its ability to account for the details of *Metaphysics* 9.

This chapter opens with a list of natural phenomena which seem to violate the maxim that "all things are for the sake of something and nothing is in vain."¹⁵ Theophrastus suggests (11a2–3) that a consideration of such cases leads one to question whether such explanations should be put forward "in all cases without qualification," and indeed raises doubts about whether "nature in all cases desires the best" (11a5–6). Some cases that seem to be troublesome for such panglossian assurances of universal design are:

1. the ebb and flow of the sea (10a28–10b1);
2. dry and moist seasons (10b2);¹⁶
3. male breasts (10b8);
4. the female emission (10b9);¹⁷
5. beards, and hair where it has no function (10b10–11);
6. the size of the deer's horns, and the troubles this causes (10b11–14);
7. certain forced and unnatural phenomena such as heron copulation¹⁸ and insects that only live for a day¹⁹ (10b14–15);
8. the nutrition and generation of animals, "for these are for the sake of nothing, but they are coincidental and due to other necessities" (10b16–19).

In addition, Theophrastus questions explanations of the windpipe's position and the location of the blending of the blood by reference to what is honorable (11a8–13). I shall establish in what follows that, in many cases, Theophrastus is discussing specific explanations to be found in Aristotle's scientific corpus. I shall argue that Theophrastus has a keen eye for explanations in which Aristotle appears to have sought a final cause, but prudence would have counseled otherwise. By examining such cases, Theophrastus challenges his readers to articulate the grounds of their uneasiness about these cases.

My first task is to establish the claim that Theophrastus is directing our attention to actual Aristotelian explanations. In the section immediately following, I do so for cases 3 and 6 from the list of "panglossian" explanations given above. In section III, I do the same for explanations of the placement of the windpipe and heart by reference to what is honorable. In section IV, emboldened by success, I make some speculations as to why the other panglossian cases appear on Theophrastus' list. In some of those cases, while we lack actual explanations, we have clear Aristotelian texts that discuss the phenomena in question. In other cases, the relationship to any specific Aristotelian material is, at best, not obvious. I conclude in section V with some remarks about whether this chapter of Theophrastus' *Metaphysics* sets a trend within the Peripatetic tradition which led to extreme skepticism about the legitimacy of teleological explanation. If it did, it is a watershed document that deserves more attention than it has received in the past.

II

CASE 3

At PA 4.10 688a12 Aristotle takes up a consideration of the chest (*stēthos*) or front part of the trunk. He argues that in viviparous quadrupeds the breasts (*mastoi*) are not located on the chest because of its narrowness, which in turn is explained by indicating the locomotive requirements of quadrupeds. In man, things are otherwise:

In the case of humans, however, due to the breadth of the chest and the need to protect the area around the heart, this place is fleshy, and the breasts become distinct; and these are fleshy in the case of males for the reason given, while in the case of females nature uses them as well for another function, as we often say it does; for it stores the nourishment for the offspring there (688a18–25).²⁰

Aristotle does indeed often argue that the nature of the organism will make use of an organ for two different functions.²¹ Typically, one function is treated as primary. In the case presently under consideration, the primary function of the fleshy nature of the chest in general, and *mastoi* which are fleshy in particular, is to protect the area around the heart, which in Aristotelian physiology is the central location of sensory integration and the origin of locomotion. Both the use of the verb *parachraomai* and the *kai* at 688a23 stress the fact that the female breasts are viewed as *primarily* for this function, and only secondarily as repositories of nourishment.²²

However, Aristotle is not entirely consistent on this point. At 692a12, the *mastoi* are carefully defined as receptacles—vessels for milk. This fact is then used to explain why creatures that are not nourished by milk lack breasts. Aristotle nowhere faces the puzzling question of why males have nipples, if only the females use their *mastoi* for nourishing offspring. He seems not to have asked why nipples should be required to carry out the chest's primary function.

It is precisely these questions that Theophrastus is drawing attention to. If one is going to define breasts as Aristotle does at 692a12, why do human males have them, equipped with nipples, no less? In this respect, they seem to be quite without a function as male organs. On the other hand, should Aristotle retreat to claiming that their primary function is the protection of the area of the heart, he is left with a functional explanation that fails to account for the specific nature of the structure in question: for nipples are not necessary for the performance of this protective function. Theophrastus has pointed to an explanatory anomaly in Aristotle's biology. As it stands,

and no matter which aspect of Aristotle's explanation we stress, male nipples appear to be "in vain." Theophrastus' intent, it will be recalled, was to question the universality of the claim that nature does nothing in vain, but always the best among the possibilities. Were one to attempt an adaptationist explanation of male nipples today, one would be similarly open to charges of panglossian functionalism.

CASE 6

Aristotle discusses horns among animals with no upper incisors and multiple stomachs in a variety of texts.²³ Theophrastus' remarks seem to make a direct reference to the discussion of *PA* 3.2, where Aristotle says:

Now in those animals to which the emanation of the horns is naturally useless, nature has provided in addition another defense; for example in the case of deer, speed (for the magnitude of the horns and their great number of branchings are more a difficulty than an aid) . . . [663a8–11].

Aristotle's general functional explanation of horns is that they exist for the sake of defense and attack (662b27–28). He denies that deer use them for this purpose, however, which makes him wonder why they have them at all. Indeed, not only are they useless—their density and structure make them a positive nuisance. In discussing the question why, if female deer have no horns, they lack teeth just as if they had horns, he responds:

. . . one reason is that they [male and female] are both of the same nature, that is, horned; and while horns are excluded from females because they are useless, they are useless to males as well. However, males are less likely to be harmed by them because of their strength [664a5–8].

The background explanation to the above remarks is complex. Aristotle argues that to be horned is to have a systematic set of hypothetically necessitated structures.²⁴ Horns are possessed for the sake of defense; the construction of horns uses up a good deal of the boney material used in other viviparous quadrupeds for teeth.²⁵ Thus they lack upper incisors. This lack of chewing teeth necessitates a more complicated digestive system with, for example, multiple stomachs. Aristotle appears to argue that, even though the female is without horns in the case being considered, the *species* of which she is a member is by nature horned. Thus the rest of the species properties follow from her being a sort of deer.

A peculiarity of the horns of deer is that they are solid, and therefore heavier than horns in other animals.²⁶ Their greater relative weight is the factual basis for both a teleological and a "mechanical" explanation for the

shedding of horns in deer. By lightening the stag's load it is useful (*heneka ôpheleias*), and it occurs of necessity because of their weight (*dia to baros*).²⁷ To suggest that the stag's losing his horns is advantageous, and to further explain this loss teleologically, is to carry the notion that they are not only useless but harmful to its logical conclusion. It also raises a serious question as to why this kind of animal is horned at all.

Aristotle can easily deal with characteristics that are not functional by seeing them as necessary consequences of the possession of functional defining characteristics, or even as species with developmental anomalies relative to some broader class.²⁸ But two of his premises in this case prevent him from falling back on these strategies. First, he insists that it is of their nature that deer are horned; second, horns are not merely useless in this case, they in fact are harmful. It is simply unprecedented for Aristotle to attempt a teleological explanation for an aspect of an organism's nature which is, at the same time, a harmful appendage that it is better off without. So, in a chapter devoted to specifying the *hou heneka* of horns (662b28, 663b21) it is the *hou heneka* of losing them that is the best he can do in this case.

Again, Theophrastus is on target. He has drawn the attention of serious students of Aristotle's science to an argument that forces us to ask whether a teleological explanation is out of place. To indicate a case in which one of an animal's defining features is not merely useless but harmful encourages us to puzzle as to when teleological explanations are inappropriate. In this case we must question the general teleological account of horns, for the deer establishes that they are not in all cases for defense. How do we then explain their presence when they are functionally harmful? And perhaps we must question the extent of nature's functionalism if it first provides a kind of animal with a harmful structure, and then the mechanisms periodically to shed that structure. Pointing to such cases is a fine method of forcing us into *aporia* about teleology.

III

I now proceed to consider the second sort of explanation listed in the introduction, namely, that in terms of the more honorable. It is found repeatedly in Aristotle's biological writings and gives pause to current commentators, as it did to Theophrastus. In regard to this second kind of explanation there will be an added benefit in looking at Theophrastus' comments, for they provide a test of adequacy for present-day interpretations. The sort of explanation in question has the form "X is p rather than q, because it is more honorable thus." Theophrastus offers some examples:

. . . for wherever the better is possible, there it is in no way lacking; for example, the windpipe is in front of the gullet, for it is more honorable;²⁹ and the best mixture takes place in the middle of the heart, because the middle is most honorable; and similarly whenever something is said to be for the sake of order (11a8–13).

It should be noted straightaway that Theophrastus sees these as specimens of a single kind of explanation which accounts for some state of affairs by noting the good it achieves, but on the face of it they are quite different. Moreover, what appears most objectionable in these explanations is precisely that they *do not* tie what is to be explained to some biological good that this feature serves for the organism. As Geoffrey Lloyd argued some years ago, there is the appearance here of the a priori evaluation of a certain location as “honorable” independently of any biological good that might be achieved by the placing of a structure there.³⁰

Again, Theophrastus is referring directly to Aristotelian arguments. While the esophagus is the avenue of food to the stomach, it is not necessary for the sake of nourishment, but rather because the lungs require a common tube which then divides. It must be of some length, which entails there being some distance between mouth and stomach. There must, then, be some passage, in order that the food which enters the mouth may proceed to the stomach, and this is the esophagus (664a12–31). Fish, as Aristotle points out, lacking lungs, and thus a windpipe, have no need of an esophagus.³¹

The windpipe, however, is placed in front of the esophagus, though this causes problems—for food to be swallowed, it must first pass over the windpipe (664b3–6).³² Nonetheless, the windpipe *must* be so placed: it is for the sake of breathing, which is for the sake of regulating heat in the area around the heart. The heart is, in Aristotle’s theory, the source of locomotion and perception, and it is the direction of an animal’s locomotion and perception which determines the part to be labeled “front.” Thus, if the heart is to be properly situated for its cognitive and locomotive roles, it will of necessity be located in a forward position. The lung (Aristotle considered it one bifurcated organ) must be there as well, for it is there in order to cool the area around the heart by means of the inhalation of *pneuma*. Again, breath is conveyed to the lungs by the windpipe, so it must be forward as well. So runs the argument from 665a9–21. But if the windpipe is located in front of the esophagus, the need for the epiglottis becomes apparent: “. . . and this is why nature has doctored up the poor placement of the windpipe, manufacturing the so-called epiglottis (665a8–9).” Aristotle concludes the discussion with the following grand generalization:

Generally, the better and more honorable (*timiōteron*) is always, wherever nothing else greater impedes it, in the case of the upward and downward

more in the upward location, of the forward and behind more in the forward location, and of the right and left more on the right (665a22–26).³³

If Theophrastus is referring to this discussion, we need first to ask whether he has the reference of *timiōteron* correct. Could not Aristotle be referring to the placement of the heart, which has just been said to be in the front necessarily?

Given that Theophrastus was an intimate of Aristotle for a number of years, it seems unlikely he is confused. The above conclusion is a generalization, but it certainly sanctions any claim that, with respect to any two structures related as before-behind, the more honorable one will be in the forward position, all things being equal. And he has just been discussing the problems created by the windpipe being in front of the esophagus. Aristotle's understanding of the cardiopulmonary system requires that the windpipe be in the front of the neck, even if this requires some doctoring up on nature's part. On the other hand, Aristotle seems to be arguing not that the windpipe is where it is because that *place* is honorable, but rather that what is more honorable is generally found in such and such a place. This is not what Theophrastus has led us to expect. To determine what is going on here we need to fill in some of the theoretical context of these evaluative references to locations. Theophrastus has once more forced us into a thorny thicket of problems.

First, it is useful to remind ourselves of Aristotle's biological concepts of direction, alluded to in our passage. "Upper" and "lower" are defined by function (*ergon*),³⁴ not by cosmic orientation. Those parts are upper which are toward the mouth and lower which are toward the opening through which waste is excreted (*Juv.* 468a2–4; *IA* 705a30–b6). Therefore, plants "have the upper lower and lower upper" (*PA* 686b35); that is, their functional upper is cosmologically lower. Only in humans is the part which determines what is biologically upward also the cosmologically upper part (*to tou holou anō*, *PA* 656a13; cf. *Juv.* 468a5, *IA* 705a30–1).

Likewise backward and forward are defined in virtue of the location of an organism's perceptual faculties, front being determined by the orientation of the sense organs (*Juv.* 467b31–34, *IA* 705b10–13), and right and left are defined by the location of the origin of locomotion—this will be *dexion* (*IA* 705b17–18).³⁵ He concludes his discussion of these basic *archai* of the investigation of animal motion with the following comment:

But it is also reasonable that the origins are from these parts; for the origin is honorable, and that which is above, forward, and to the right is more honorable than that which is below, behind and to the left. Yet it is also well to speak of these matters the other way around; to say

that it is due to the sources being in these positions that these positions are more honorable than the opposing parts (706b11–16).³⁶

Two quite different inferences are sanctioned here. The first inference is:

Being honorable belongs to what is above, forward and on the right.

Being honorable belongs to the origin of organic activities.

Being above, forward and on the right belongs to the origin of organic activity.

This argument may be a conscious echo of *Timaeus* 45A:

And the gods, holding that the front is more honorable and fit to lead than the back, gave us movement for the most part in that direction.
[Cornford translation.]

As Aristotle states it, the inference is faulty. But the force of it is this: If certain placements for bodily organs are intrinsically more honorable than others, and if those organs which serve as the origins of organic activity are honorable, they ought to be placed in the intrinsically more honorable position. Under the guiding assumption of a nature (or a demiurge) which does nothing in vain, this does seem a plausible pattern of reasoning.

Aristotle, however, goes on to suggest a pattern of reasoning which allows us to give an explanation for *why* we call certain regions of the body more honorable than others. He appears to want to provide a rational grounding for some hitherto unargued assumptions. *This* explanation goes:

Being honorable belongs to anything which is an origin of organic activity.

The origins of organic activity belong to certain positions more than others.

Thus, being honorable belongs to certain positions more than to others.

Thus, as opposed to the *Timaeus*, movement in the forward direction is not a result of the front being honorable—rather, we predicate “honorable” of the front *because* that is the direction of locomotion and perception. Aristotle is not denying the truth of the view that the front is more honorable than the back. But he is suggesting that this is not a basic principle of biology; it is to be explained by principles having to do with basic organic activities.³⁷

Let us now return to the location of the windpipe. Its location is ultimately a function of the position of the heart. From a teleological perspective, the problem raised by the position of the windpipe is that it is potentially quite

harmful. Being in front of the esophagus, food must pass over it when we eat. The epiglottis looks to Theophrastus (and even Aristotle's own language suggests this) like a Rube Goldberg device which, *prima facie*, could have been rendered entirely unnecessary by the placement of the esophagus in front of the windpipe. In the aftermath of this worry comes our passage about honorable things being placed forward, upward, or to the right. The fundamental issue for an Aristotelian is this: Why is the windpipe positioned in such a way as to require the epiglottis, when, by being behind rather than in front, it could have solved the engineering problem in a simpler way. Aristotle's answer goes something like this. The heart's forward position is explained by its being the fundamental organ of perception and locomotion. It is therefore determinative of what part of the body shall be called "forward." Its "honor" (and that of the other perceptual and locomotive organs) accounts for our willingness to call the forward part of the body "honorable." By extension, the windpipe is where it is because of its relation to the heart; it is for the sake of the heart. The esophagus, on the other hand, while a part of the digestive system, plays no digestive role—it is only there because of the windpipe, which is hypothetically necessary. And "the better and more honorable wherever nothing else greater interferes . . . is always in the more forward rather than the more backward position." That is, the better and more honorable organ (the windpipe) is in front of the less valuable organ (the esophagus), because of its functional tie to the organs which lead to our labeling a certain part of the body front.

The *ceteris paribus* clause (" . . . whenever nothing else greater interferes . . .") in Aristotle's formulation can be explained by reference to a passage in *PA* 2.14. Aristotle is attempting to explain the relatively greater amount of hair on the backs, as opposed to the underbellies, of viviparous quadrupeds. What is initially surprising is that nature does *not* offer greater protection to the more honorable part (the belly being functionally front, i.e. where the heart is). "Now in quadrupeds the back needs more protection, while the forward parts, though more honorable, are without hair because quadrupeds are bent over" (658a19–21). Here is a case where "something greater interferes"—all things being equal, nature protects the more valuable parts, but when they need protection less than some other parts this tendency is overridden.

In the explanation we have been scrutinizing, the windpipe might have been behind the esophagus, but only on the condition that it would have been biologically worse off the "honorable" way. Had we no epiglottis, for example, surely nature would *not* have situated our windpipes in front of the esophagus just to insure that the entire cardiopulmonary system were in the biologically most honorable place. It could easily run the windpipe down behind, and extend it over to the lungs on the way down. But given

the possibility of an epiglottis (or its analogue in birds and reptiles), there is no reason not to place it in the more honorable place; and nature "is always a cause of the better from among the possibilities."

Theophrastus has again been a useful guide to Aristotle's actual difficulties. His objections to these arguments were not based on their importation of prebiological value judgements into the biological realm but on their ad hoc panglossian flavor. "Nature does nothing in vain? But you yourself say the windpipe is placed most carelessly, so that nature must 'doctor things up' with the epiglottis. Even at that, as you note, we still choke on our food from time to time." There is force to this objection, but it is the objection of one biologist to another.

As we have seen, Theophrastus also raises an eyebrow at the suggestion that blood is blended in the middle of the heart because that is the most honorable place for this to occur. Aristotle does indeed refer to the heart as the origin of the blending of the blood (650b29, 686a9) and discusses the purity of the blood in the middle cavity of the heart (667a3-6, *HA* 496b10),³⁸ but to my knowledge he nowhere in the works now extant develops these ideas in the precise direction suggested by Theophrastus. We can, however, imagine such a development from the following aspects of the theory with which we are provided:

1. It is better, where possible, for the heart to have three cavities, in order that there can be a single, common beginning for the two distinct systems of blood vessels (666b33-34).
2. Where the heart has three chambers, the blood in the middle chamber is finest (*HA* 496b10).
3. The heart is properly located in the middle, front, upper portion of the body, as equidistant from the senses and limbs as possible (665b18-21; 666a13-17).³⁹
4. Nature establishes what is more honorable in the more honorable place, where nothing more important prevents it, which is why the heart is where it is (665b20-21).

Thus, Aristotle certainly believed a blending occurs in the heart, that there is a middle cavity, and that its contents are the most pure or fine. It is thus not unlikely that he also said that the blending that occurs there is best, and it occurs there because it takes place in the most honorable location. That is, this is the best place for such blending to take place, and therefore nature has arranged for it to occur there.

Once again, Aristotle is arguing from assumptions about what biological functions are "most honorable," about which location would be biologically

best for the organ which performs those functions, and from his biologically based premise that nature always goes for the best among the possibilities.

And this is just the way in which Theophrastus treats them. He does not object to their normative nature but to the premise that because an arrangement is best, nature will invariably arrange things thus:

For even if desire is thus, still it is surely apparent that that which neither obeys nor is receptive of the good is great, or rather is much greater. For that which is alive is quite a small part of things, while that which is lifeless is boundless. And among those which are living, their existence is brief, even if it is better (11a13–18).⁴⁰

That which has desire may go after the good (at least the apparent good), but this is a small part of the natural world. To tighten up this objection, Theophrastus would need to point out that even among things that are alive, many processes are not under the direction of *orexis* (development, for example), and thus not obviously directed toward and invariantly productive of the good. As it stands, it seems only to rule out claims that nonliving processes are for the best and happen because it is honorable thus, and the arguments he has been critical of up to this point have made no such claims. They have, however, extended teleology beyond the realm of *orexis*, and that is to extend it beyond the realm where it obviously has a place into a realm in which its place needs to be argued for. Moreover, Theophrastus seems to be pointing out that one must not simply assume that a part's being in a certain location guarantees that it is in the best possible location—this must be shown, not assumed. At first glance, many of Aristotle's arguments appear to make the assumption that the arrangement that is found in nature *must* be the best possible, and it is the task of the biologist to figure out why this arrangement is best. (This is, of course, a valuable heuristic, and lies behind the engineering analysis-optimal design arguments in evolutionary biology—it becomes dangerous only when it is forgotten that it is a heuristic for design hypotheses and not a shortcut to well-confirmed theories.) Take the case of the placement of the windpipe. Aristotle wants to argue that its placement is *poor, and yet* more honorable than any alternative. Perhaps he would have been better off withholding teleological explanation in this case. I have suggested the lines of reasoning that may have led Aristotle to the conclusions he reaches, but Theophrastus' point, understood as a means of raising problems of a methodological sort, is that we have little to go on beyond our uneasiness as a means of determining when such explanations are inappropriate.

IV

Theophrastus' rapid, shorthand list of examples of things inappropriately said to be for the sake of something (10a28–10b20; see above, section I) is rather like Aristotle's list of objections to the theory of Forms at 990b9ff. of his *Metaphysics*. Taken on their own the examples are nearly meaningless. I have attempted to place them within the context of a debate within the research program of the Lyceum, and to identify the examples as based on actual explanations in Aristotle's biology. In this section I briefly point to the context of other items in this list, though I do not have the space to consider these cases in detail. In all of the following cases my suggestions for a context are far more speculative than those previously made, about which I am reasonably confident.

CASE 2

A text in *Physics* 2.8 is thought by some scholars to suggest an Aristotelian teleological explanation for fair weather in the summer and rain in the winter.⁴¹ Others feel this is not required by the text and is unlikely, given Aristotle's account of seasonal changes and rainfall elsewhere.⁴² I have no desire at present to enter into this debate, but that the text is open to this sort of controversy may account for "dry and moist seasons" being on Theophrastus' list.

CASE 4

The female emission (*proesis*) may refer to two quite different phenomena—either the vaginal discharge, which Aristotle mentions at *GA* 1.20 728a1–6, or the menstrual discharge (*hē katamēnia*). Aristotle uses the term *proesis* for a variety of physiological emissions, including that of the *katamēnia*, but not of the vaginal discharge, which he refers to as an *ekkrisis*.⁴³ One other piece of evidence in favor of the *katamēnia* being referred to here is that the referent must be something that could plausibly be given a teleological explanation by Aristotle, and that explanation could also plausibly be called into question by Theophrastus.

The menstrual fluid seems ideally suited, for it is both a residue that is produced of necessity and with a good deal of random variation in its production, which nature nonetheless uses "for the sake of the better and the end" (*GA* 2.4 738a10–b9).

CASE 7

As I have already noted, the references to the day fly and the copulation of herons are almost certainly to phenomena noted in Aristotle's biology.

The day fly could be described as *para physin* for two quite distinct reasons. Aristotle gives them both in *HA* 1.5: "It is peculiar not only in virtue of its life (*kata ton bion*), whence also it gets its name, but also because, while being four footed, it is winged as well (490b1–3)." The latter combination of traits violates a universal principle of Aristotle's theory of motion, namely, that bloodless creatures are either footless or have many (i.e., more than four) feet. He avoids this problem by shifting in this passage to talking about points of motion and noting that the day fly has eight of those (four feet, four wings).⁴⁴ At any rate, Theophrastus' mode of expression ("as the day fly lives") suggests it is the shortness of their life that is the *idion* to which he is referring. The less said about the copulation of herons, the better.

CASE 8

Finally, let me consider that case which is most difficult to understand as a reference to Aristotle. It is 10b16–19 and may be translated as follows:

And the greatest and most obvious case concerns the nourishing and generation of animals; for these are for the sake of nothing, but are coincidences and due to other necessities. For if they were for the sake of animals, they ought always to be uniform and unvaried (*kata tauta kai hōsautos*).

Aristotle's theory of generation is rightly thought to lie at the heart of his teleology. Up to this point Theophrastus has been challenging explanations that stretch teleology to the breaking point, but this comment seems to challenge the very idea of teleology as Aristotle understood it. And again, if biological generation, among natural processes, is not "uniform and unvaried"—what is?

I cannot pretend to understand what is going on here, and offer only two brief speculations in order to suggest lines of inquiry. It may be possible, first, that Theophrastus is raising the problem of variability in the results of animal generation which is down played in Aristotle's *GA* 1–2 but comes to the fore in *GA* 4–5. There, variations in the "temperature" of the semen's heat and the "coolness" of the *katamēnia* are used to explain the vast range of variation that characterizes the offspring of a given kind of animal. Are these coincidental and due to other necessities? And is this the sense in which generation is not uniform and unvaried? To see a conflict between these explanations and teleology, Theophrastus would need to misunderstand Aristotle on a fairly basic level; on the other hand, if he is only raising issues for a dialectical resolution, there is a more charitable way of taking these comments.

What of nourishment? As with all these examples, the central problem is the telegraphic style—Theophrastus' text gives us no help as to what he might mean by *trophai* at 10b17. However, there is a text of Aristotle which does concern a teleological explanation for the existence of nutrients. It appeals to the "nature does nothing in vain" principle under scrutiny here and is thought by modern commentators to be *prima facie* dubious on Aristotelian grounds.⁴⁵ I am referring to a well-known text in *Politics* 1.3, which suggests that plants are for the sake of animals and the other animals are for the sake of man, especially *heneka tēs trophēs*.

If, then, nature does nothing incomplete or in vain, it is necessary that nature has made all these things for the sake of human beings (1256b21–22).

This passage uses the very axiom which is under examination in *Metaphysics* 9, and suggests a dubious teleological explanation which is at odds with Aristotle's usual teleological account of why various plants and animals come to be. I am not suggesting that this explanation cannot be made consistent with Aristotle's biological theory when seen in the proper perspective, only that it is worthy of skepticism and dialectical examination.⁴⁶

This suggestion has many problems, the worst of which is that, however much this passage may conflict with Aristotle's biology, it is *not* because the biology suggests that plants and animals come to be "coincidentally." The conflict is between an apparent cosmic teleology in the above passage, requiring a design capable of ordering kinds for the sake of other kinds, and Aristotle's typical view that it is the activities constituting an organism's life which are the goal of development and what the various structures produced are for.

Theophrastus has deftly picked out passages in Aristotle that reveal him struggling to explain a structure teleologically, when he might have been better off admitting that such explanations are inappropriate. Has Theophrastus provided a clear statement of criteria for determining the limits of teleological and normative explanations in science? Not explicitly, and given that this is just a problem-raising discussion, that is not surprising. However, when the examples Theophrastus provides and the questions he raises are focused upon, two limiting principles suggest themselves:

1. Neither regularity of production nor universality of a trait within a species is sufficient to establish that something exists for the sake of some end.
2. At some point in the construction of an adaptationist explanation (which no one to this day has very carefully specified) the number of subsidiary hypotheses required outweighs the explanatory value of the design story.

As with a detective novel, there is a point at which the twists and turns of the plot pass beyond the point of being ingenious yet plausible, and become farfetched and implausible. The male's breasts, the deer's horns, the location of the windpipe, have, we might think, passed over that line, however hard it may be to define precisely.

Metaphysics 9 suggests a debate going on during Aristotle's life and after his death about the limits and logic of teleological reasoning. Theophrastus' *De causis plantarum*, a book one might expect to be filled with teleological reasoning, is remarkably devoid of it.⁴⁷ We know from Lucretius that an attack on teleology in biology was an aspect of Epicurus' thought.⁴⁸ And if we are to trust the reports of Diogenes Laertius and Galen, and suppose that Erasistratus was closely tied to the Peripatetics, we may see the move to rein in teleology in his work. For Galen is often angered by the fact that a man of such obvious gifts could from time to time lapse into saying that certain organs have no function.⁴⁹

The twin concerns of biologists who use teleological explanations permeate Theophrastus' discussion. On the one hand, it is temptingly easy to invent a story which will explain why what one finds to be the case is best. On the other hand, we are always too hasty in concluding that things which are not understood have no function. Galen's anger with Erasistratus is often well founded. And though no one has determined their value, I stubbornly refuse to do away with my tonsils. What was, and is, needed is a methodology for the testing of adaptationist claims. Like so many debates in the history of scientific methodology, the one over the limits and value of teleological explanation in biology is as alive today as it was when it began—in the fourth century B.C. And there is evidence that some of Aristotle's admirers, like some of Darwin's, had a tendency to throw the teleological baby out with the panglossian bathwater.⁵⁰

NOTES

1. Richard Sorabji, *Necessity, Cause, and Blame* (Cornell 1980) ch.10; Martha C. Nussbaum, *Aristotle's De Motu Animalium* (Princeton 1978); David Balme, *Aristotle's De Partibus Animalium I and De Generatione Animalium I* (Oxford 1970) 96ff.; Allan Gotthelf, "Aristotle's Conception of Final Causality," *Review of Metaphysics* 30 (1976) 226–54; John Cooper, "Aristotle on Natural Teleology," in *Language and Logos*, ed., M.C. Nussbaum and M. Schofield (Ithaca 1982) 197–222; James Lennox, "Teleology, Chance, and Aristotle's Theory of Spontaneous Generation," *Journal of History of Philosophy* 20 (1982) 219–38.
2. The relationship between the functional explanation of existent structures and the teleological explanation of development is a complex issue; see Allan Gotthelf, *Aristotle's Conception of Final Causality* (Ph.D. diss., Columbia University) 277–90.

3. Herman Bonitz, *Index Aristotelicus* = *Aristotelis Opera*, vol. 5 (Berlin 1870) 836b28–37. Bonitz lists 23 statements of this principle, and the list is not complete.
4. *PA* 2.14 658a22–24, 3.3. 665a9–26; 3.4. 665b18–21, 3.10 672b21.
5. *PA* 4.13 696b28–32, *Pol.* 1256b15–22; cf. Balme 96.
6. *De An.* 2.4 415a22–b8; *GA* 2.1 731b24–732a1; cf. Balme 96–97.
7. Cf. John Beatty, "Optimal-Design Models and the Strategy of Model Building in Evolutionary Biology," *Phil. Sci.* 47 (1980) 532–61; and John Maynard Smith, "Optimization Theory in Evolution," *Annual Review of Ecology and Systematics* 9 (1978) 31–56.
8. The critics' points are well put in R.C. Lewontin, "Fitness, Survival, and Optimality," in *Analysis of Ecological Systems*, ed., J.J. Horn, et al. (Columbus 1979) 387–405; S.J. Gould and R.C. Lewontin, "The Spandrels of San Marco and the Panglossian Paradigm: A Critique of the Adaptationist Program," *Proceedings of the Royal Society of London: Biology* 205 (1979) 581–98; John Maynard Smith, *The Theory of Evolution* (Baltimore 1966) 16–18; C.G. Williams, *Adaptation and Natural Selection* (Columbia 1966) intro. and ch. 9.
9. Lewontin, "Adaptation," 125.
10. Lest the reader put too much interpretive stress on the singular *tina horon*, the earlier passage has *tinās horous* (11a2).
11. W.D. Ross and F.H. Fobes, *Theophrastus Metaphysics* (Oxford 1929) x; cf. Eduard Zeller, *Aristotle and the Early Peripatetics*, trans., B.F.C. Costelloe and J.H. Muirhead (New York 1962, German ed. 1897) 354, n. 2.
12. For example, *Metaph.* 8.4, 1044b12 says that eclipses are not for anything; *Phys.* 2.7, 198a18 says the same of mathematical entities; *Phys.* 2.5–6, 8 rules out chance processes; and *PA* 3 677a16–18 notes that certain residues are necessary biproducts of processes that are for the sake of something. Thus, while these residues presuppose processes that are for the sake of something, they are not themselves for the sake of something.
13. One has to keep in mind the aims of any given work, as well as its subject matter, in dealing with this issue. *HA* is virtually devoid of teleological explanation, but that is because it is virtually devoid of explanation, not because teleological explanations of its subject matter would not be appropriate. On the other hand, the *Meteorology* and *On Length and Shortness of Life* are explicitly explanatory and shun teleology. (The remarks at *Meteor.* 4.12 389b28–390b1 refer to material elements of organisms, as is clear when the passage is compared with a similar one at *PA* 2.1 646b11–19. Cf. David J. Furley, "The Mechanics of *Meteorologica* IV: A Prolegomenon to Biology," in *Zweifelhaftes im Corpus Aristotelicum: Studien zu Einigen Dubia, Akten des 9. Symposium Aristotelicum*, Herausgegeben von Paul Moraux und Jürgen Wiesner [Berlin 1983] 73–93.)
14. On which see Gotthelf, *Dissertation* 1–89.
15. *Metaph.* 9 10a22–23. It is worth noting that Aristotle never speaks this loosely; it is always *hē physis* that does nothing in vain and acts for the good. Given Aristotle's persistent use of the definite article in stating this fundamental biological principle, I take it to be the nature of this or that sort of thing which does what is best in the circumstances. Thus processes or structures not under the control of the nature of the thing would not turn out best, unless by chance.
16. Theophrastus generalizes from these first two cases to any where what is to be explained are "changes, destructions, and generations which are first one way and then another" (omitting, with Ross, *ē tinos hai prochōrēseis* at 10b1).

17. Either the menstrual blood or the vaginal discharge; I incline to the former. See below, section IV.
18. The account of this subject in *HA* 9.1 609b23–25 is quite fantastic: “Among the herons, one species mounts and has intercourse only with great difficulty. For it both screams and, so they say, drips blood from its eyes when it copulates; and it lays its eggs awkwardly and painfully.” As so often with such claims, Aristotle reports it, but uses *hōs phasin* to remain neutral on its veracity.
19. Discussed at *HA* 1.5 490b1–4, *HA* 5.19 552b20–23. See below, section IV.
20. Notice that the nipple, which seems clearly designed for the nutritive function, is not mentioned here.
21. E.g., 658b33–659a36 (on the elephant’s trunk); 671b1–3 (kidneys); 684b1 (lobster claws); 687a15, b5 (hands); 689a6–8 (penis); 690a1–5 (tails); 691b8–9, 25 (crocodile’s upper jaw).
22. I am assuming that *kai pros heteron ergon* is not intended to exclude the first function. I assume this because (1) women’s hearts also require protection, and (2) in this pattern of explanation Aristotle typically assumes that the second function is additive in this way. So, for example, the fact that the elephant uses its strange nose as a hand does not change the fact that it is a strange nose (658b33–659a36). An exception is the lobster’s claw (684a31–b2), but it is anomalous in a variety of respects. That there are primary and secondary functions is clear from the way such cases are described, i.e., “x is for a, but nature makes use of it for b.”
23. *APost.* 2.13 98a17–19; *PA* 3.2 663b33–664a8, 14, 674a31–33; *HA* 2.17 507a33–507b12.
24. That is, if they had horns, they would have these other features. The direction of the implication is crucial, because Aristotle knew that having few teeth and many stomachs did not imply that a creature was horned. Cf. *HA* 2.1 501a14; *PA* 3.14 674a31–34.
25. *PA* 3.3 663b25–664a3.
26. *HA* 2.1 500a6–7, *PA* 3.3 663b12–13.
27. *PA* 3.3 663b14.
28. Cf. *PA* 4 677a16–18. All moles can be viewed as developmentally anomalous viviparous quadrupeds (*HA* 1.9 491b28–34), as can seals (*HA* 566b27–567a14).
29. Here *timōteron*, as the next example shows, refers to the placement of the windpipe, not to the windpipe itself.
30. In *Polarity and Analogy: Two Types of Argumentation in Early Greek Thought* (Cambridge 1966) 52–61. Cf. *Timaeus* 44D–45B—clearly the origin of Aristotle’s use of this language.
31. Cf. *PA* 3.3 664a3–36.
32. Aristotle’s vocabulary can be confusing. When necessary, he distinguishes the larynx (*ho pharynx*) from the trachea (*hē artēria*); but he often uses the two terms interchangeably. I have followed Peck’s expedient of using *windpipe* as a translation for both to avoid confusion. Theophrastus is discussing the trachea, though he uses the term *pharynx*.
33. Cf. *HA* 1 494a20–b1; *Juv.* 476a16–b10; *IA* 4–5.
34. Cf. *IA* 4 705a28–b5; *PA* 4 680b14–15, 683b19–25.
35. As so often, the language is Platonic but has been given a naturalistic meaning by shifting the basis of evaluation to biological considerations. This radical shift in basic assumptions seems insufficiently appreciated in the work of Lloyd (esp.

- Polarity and Analogy*) and Simon Byl, *Recherches sur les grands traités biologiques d'Aristote: sources écrites et préjugés* (Brussels 1980) 210-51.
36. Michael's reading of this passage (CIAG vol. 22.2, p. 144.5) is confused, and makes the argument appear circular. Cf. A. Preus, *Aristotle and Michael of Ephesus on the Movement and Progression of Animals* (New York 1981) 155-56.
 37. I have a better understanding of this argument thanks to the persistent proddings of Malcolm Schofield and Richard Sorabji during the Theophrastus Project Conference at the University of Liverpool, March 1982. This does not imply their agreement with my current interpretation.
 38. As Ross notes (*Theophrastus, Metaphysics* 72). Compare HA 496a20-23, *De somno* 458a17. For a recent account of the problem of determining the reference of *hē mesē koilia*, see J.R. Shaw, "Models of Cardiac Structure and Function in Aristotle," *Journal of the History of Biology* 5 (1972) 335-88.
 39. Cf. *Juv.* 468b32-469b8. Lloyd's account here (*Polarity* 53) is, I think, confused. He quotes PA 665b18ff. That the heart is in the middle in virtually all animals that have one, except man. As it is never thought of by Aristotle as on the right, PA 666b6 cannot be considered a special argument to show why it is not on the right in man, as Lloyd suggests. The right side is more honorable, because the more honorable is whichever side originates motion—but this normative claim can only be used to explain facts having to do with motion.
 40. The manuscripts have *kai autōn tōn empsychōn akariaion kai beltion to einai*. As Ross notes, this is a rather odd conjunction of predicates. Usener suggested *tōi* for *to*, and Ross made two suggestions; to read *akariaiou* for *akariaion*, or to read *kei* for the second *kai*. He prints the former yet gives a highly interpretive translation. I have opted for his second suggestion though with no great conviction.
 41. John Cooper, "Aristotle on Natural Teleology," in *Language and Logos*, ed. M.C. Nussbaum and M. Schofield (Ithaca 1982) 29-30, nn. 22, 23; David Furley, "The Rainfall Example in *Physics* 2.8," in *Aristotle on Nature and Life*, ed. Allan Gotthelf (Pittsburgh 1984).
 42. Nussbaum 94; Gotthelf 240-42; Charlton 122-23.
 43. This admittedly proves little, for virtually everything that Aristotle refers to as a *proesis* he also refers to as an *ekkrisis*, so that which term was used in a given instance is probably a matter of chance. Cf. Bonitz, 228b20-28, 637b44-53.
 44. This is consistent with *De incessu*'s basic assumptions, which are that blooded things move on four points or less, and bloodless on more (704a10-13; 707a16-20). However, the dayfly does seem to be evidence against the claim of IA 14 713a 27-29 that "of the bloodless creatures that have feet, none are four-footed, all are many-footed." Professor Balme has suggested that this is evidence that the dayfly was not part of Aristotle's experience when the IA was composed.
 45. For two very different attempts to deal with it cf. Cooper, "Aristotle on Natural Teleology" 218-19 and Balme, PA I/GA I 96.
 46. Cf. PA 4 696b26 on sharks' mouths; and see Balme 96.
 47. Professor Luciana Repici-Cambiano's comments on this paper in Liverpool stressed Theophrastus' use of analogy between plant and animal structures and of the principle of reproduction according to type, in order to indicate that Theophrastus was working within the teleological tradition of Aristotle. I have two responses to this. First, I don't wish to deny that Theophrastus allows for teleological explanation in principle—only that, at least in botany, he is careful and guarded in their use. Second, the use of the above patterns of reasoning, in the absence of the patterns A *heneka* B, or A *dia to beltion*, does not establish her point. For

Lucretius uses the patterns she mentions and denies the legitimacy of teleological explanation.

48. Cf. *De rerum natura* 4 823–858.

49. Cf. *De naturalibus facultatibus* 1.13, 35 and 2.4, 91, 132; *De usu partium* 4.15 and 5.5. Galen consistently accuses Erasistratus and even more his followers, of paying lip service to the principle that nature does nothing in vain, while in practice denying that various organs are for the sake of anything. On the connection between Erasistratus and the Peripatos, cf. I.M. Lonie, "Erasistratus, Erasistrateans, and Aristotle," *Bull. Hist. Med.* 38 (1964) 426–43; *Diogenes Laertius* 5.57.

50. This is a revision of a paper first presented at the University of Texas, Austin, in 1982 and at the Theophrastus Project Conference at the University of Liverpool in 1983. I would like to thank all those with whom I discussed this topic on those occasions, and especially Michael Frede, David Furley, Luciana Repici-Cambiano, Malcolm Schofield, and Richard Sorabji. I would also like to thank Geoffrey Lloyd for written comments, and the Trustees of Harvard University for providing support (through a fellowship at the Center for Hellenic Studies) so that revisions could be made.

Medieval Evidence for Theophrastus' Discussion of the Intellect

Pamela M. Huby

This essay is an exploration of a problem that arose quite unexpectedly in the course of collecting passages bearing on Theophrastus' views on the intellect. It has led me into important areas about which I know very little, and I hope to give those who may know even less than I do an idea of the issues involved. The central problem is whether there is evidence for Theophrastus' views in Arabic and medieval Latin sources which is not derived from Greek sources known to us. If there is such evidence, we can also ask how it reached those authors who survived, and to what extent their accounts are a fair record of what Theophrastus actually said.

The only substantial Greek sources on this topic are Themistius, whose "Paraphrase" of Aristotle's *De anima* is readily available in *CIAG* vol. 5.3, and Priscian of Lydia, whose *Metaphrasis* of Theophrastus may be found in *Suppl. Arist.* vol. 1.2. Although both authors are late (fourth and sixth centuries A.D. respectively), they corroborate one another, and we need not doubt that between them they give us several verbatim quotations from Theophrastus' own *De anima*, which probably formed part of his *Physics*.¹ It is clear that Theophrastus devoted considerable attention to Aristotle's account of the intellect (*nous*) in *De anima* 3.4–5 and in a number of other scattered passages that raise many problems of interpretation. At the end of his quotation from Theophrastus, Themistius apologizes for breaking off in the middle, saying that it would be a long business to add what follows, though it is not stated at length but too concisely and shortly in expression, and in content it is full of difficulties, examinations, and solutions.² Some of these can be extracted from Priscian, but he is a difficult writer to use, embedding short quotations from Theophrastus in a long commentary of his own, in which it is not always clear where Theophrastus' words begin and end.

We have no reason to question Themistius' account, and we may see Theophrastus' study as resembling in some ways his *Metaphysics*, being long on problems but perhaps rather short on solutions. His solutions tend to be of a linguistic kind: he frequently says that we must understand the terms involved in a special way. This leads to a caution about later evidence; much of this is in the form of positive arguments, but it seems more likely that they were originally aporetic and did not lead to positive doctrines. This means that we cannot use the test of consistency with other doctrines to decide whether later arguments came originally from Theophrastus.

Here is one example of his terse style, from Priscian p.29.18–23, referring to Aristotle, *De anima* 3.5 430a19–20 and similar passages:

If it is when the intellect is active that it becomes things, and at that time it is most both (i.e. intellect and things), things and intellect will be one and the same. . . . is it the case, then, that when it is not thinking, not being things it is also not intellect?

For the central purpose of this paper, the problem of medieval sources, we may largely ignore Priscian, returning to him only briefly on three occasions. For there is no mention of him in later writers, either Arabic or Latin, and I do not think he could have been used by either.³ Themistius, on the other hand, is quoted frequently, and his *De anima* "Paraphrase" was translated into Arabic. It has, I think, been universally⁴ assumed that all Arabic and medieval Latin writers got their knowledge of Theophrastus' views on the intellect from that single work in which only about fifty lines are relevant. This I can no longer accept. In those writers there are many references to views on the intellect in which Theophrastus' name is frequently coupled with that of Themistius, but which have no obvious source in *our* Themistius. Further, the assumption that the Latin writers got all their material from *our* Latin Averroes, i.e. the *Long Commentary on the De anima*, cannot be sustained.⁵ If it were so, we would have to suppose that writers who in other respects seem reasonably intelligent and honest were afflicted here with stupidity and dishonesty to an extreme degree, both grossly misunderstanding the texts they had before them and gratuitously applying the names of Theophrastus and Themistius to arguments on no grounds whatsoever. Faced with this difficulty, some editors of medieval texts have been content to give imprecise references to Averroes that in the end turn out to be irrelevant; on the other hand, Barbotin, who paid attention to details, had to conclude, for example, that Averroes, in using Themistius, was capable of mistaking the possible for the active intellect.⁶

Misunderstanding and confusion are certainly to be found in our material, as I shall illustrate, but not on this scale, and it is far easier to explain the

existing situation by assuming that (1) the Arabic writers had access to now-lost material from Themistius, in particular a work on the soul in two parts (*maqalah*) mentioned by al-Nadim in the *Fihrist*,⁷ and even possibly Theophrastus' own *De anima*, as they had his *Metaphysics*, and (2) the Latin writers had access to translations of a number of Arabic works other than the main one of Averroes, some of which may still exist unpublished.

The main sources I propose to discuss are:

1. Averroes, *Long Commentary on the De anima*, written in Spain in the second half of the twelfth century. The medieval translation into Latin by Michael Scot (1227–1230) has been edited in this century by F.S. Crawford, and there are also parts of the sixteenth-century translation, from a Hebrew version of the Arabic, by Jacob Mantinus,⁸ available in the Venice edition of 1562–1574, reproduced in 1962 by Minerva. (The Venice edition contains in addition some very short works by Averroes which also mention Theophrastus.)
2. Albert the Great's commentary on Aristotle's *De anima*, also called *De anima*, written between 1254 and 1257. Other works of Albert are also of interest. He shows a wide-ranging knowledge of Arabic writers.⁹

To start on a note of caution, let me first discuss one case where something has clearly gone wrong. Albert, *De anima* 3.3.7 (*Opera omnia* vol. 7.1 p.217. 1–77 Stroick) has a set of arguments about the relation of the agent and possible intellects, headed "Digression Stating the Opinion of Themistius and Theophrastus." In this "they" (*isti*) are shown criticizing the views of Alexander of Aphrodisias. But Theophrastus could not have criticized Alexander, who lived five centuries after him. We cannot, therefore, take all that Albert tells us at its face value. It is not even the case that in the surviving work of Themistius Alexander is criticized by means of arguments drawn from Theophrastus. Indeed Themistius refers to Alexander only three times, and never in connection with the intellect. It is, however, a plausible suggestion that in a lost work Themistius did something of the kind.

I now turn to a problem of great philosophical as well as historical complexity. Albert, in an earlier "Digression Stating the Opinion of Themistius and Theophrastus," has the following:

- .85 negant etiam intellectum esse possibilem ut possibilem ante actum, licet concedant cum esse in anima, prout est subiectum luminis agentis. si autem quaeratur ab ipsis de dictis Aristotelis, qualiter intelligantur, quae dicit de natura possibilis intellectus, dicunt, quod intelliguntur de eo quod est subiectum agentis luminis; et illud lumen habitum ab ipso est speculativus intellectus. cum autem dicitur, quod potentia est omnia intelligibilia et actu nullum, dicunt, quod hoc sic est, quia lumen eius aliquando est super intelligibilia, et tunc ipsa denudatio est actu intelligere,
- 184.1
- .5

.10

quod vocatur speculativus intellectus qui dicitur adeptus. isti enim ponunt quadruplicem intellectum in anima, agentem scilicet, qui denudat formas, et possibilem, qui recipit lumen agentis, et tertium compositum ex utroque sicut diaphanum lucidum, quem vocant speculativum, et quartum, qui fit splendore luminis habiti super intelligibilia, quem vocant adeptum (*De anima* 3.2.5, p.183.84–184.13).

The final sentence states that they place a fourfold intellect in the soul: the agent; the possible; a third made up from both called the theoretical (*speculativum*); and a fourth called “acquired” (*adeptum*). No earlier source says this. The first three are frequently discussed in connection with Theophrastus but the *intellectus adeptus* is not, and it raises many problems.

First, there is a textual problem. Lines 6–7, *quod vocatur speculativus intellectus, qui dicitur adeptus*, appear to be in conflict with the following lines, which distinguish between the speculative and the acquired intellects, and I therefore suggest a lacuna between *intellectus* and *qui*, probably caused by homocoteleuton.¹⁰

There is no direct reference to an acquired intellect in Aristotle or Theophrastus. The earliest we have is in Alexander of Aphrodisias, *De anima* p.82.1, where there is, in this passage only, a distinction between the natural and material intellect on the one hand, which is in all men, and that which is acquired (*epiktētos*) and arises in us later, being a form and *bexis* and perfection of the natural (intellect), which only educated men have. This, as far as it goes, makes perfect sense. It takes up Aristotle’s distinction (*De anima* 3.4 429b6–10) between the potential state of the man who has knowledge but is not using it, and the potential state of a man or child who has intellect but has not yet learned or found out anything. In this sense the educated man has an acquired intellect.

But this is only part of the story. An indication of what came later is found in Averroes’ *Long Commentary*, which gives several quotations from Alexander that we can check with the original text. Here, in the Latin translation of Averroes, the word *adeptus* is used both for *epiktētos*, as above, and for *thurathen* in contexts where Alexander is referring to the notorious passage in the *De gen. anim.* 2.3 736b27–8, where Aristotle says that *nous* (undifferentiated) comes from outside.¹¹ It is not necessary to go into the tortuous details of the views on the intellect of Arab writers like al-Fārābī,¹² who were also influenced by neo-Platonic thought, to understand what complications can arise from conflating Alexander’s *epiktētos* and Aristotle’s *thurathen*. Both may perfectly properly be called “acquired,” but they are clearly utterly different. We have, then, to ask not only whether there is any justification for what Albert says about Theophrastus, but also what *adeptus* should mean here.¹³

We cannot dismiss out of hand the suggestion that Theophrastus himself might have used *adeptus*, or rather its Greek original *epiktētos*, for the *thurathen* intellect. In some of the passages given by Themistius, Theophrastus discusses the way in which *nous exōthen ōn* (intellect being from outside) is yet *sumphuēs* (connate) (*In De anima* 107.31–2). Now, *sumphuēs* is not used by Aristotle in this connection, but *sumphuēs* and *sumphutos*, which he uses interchangeably at *Meteor.* 4.5 382b11–12, are often used as antitheses of words like *epaktos* and *epiktētos*, and also of *thurathen* (*De somno* 2 456a17). Theophrastus' question seems to arise from the *thurathen* passage in *De gen. anim.*, and *sumphuēs* can naturally be taken as the antithesis of *thurathen* there, but since it is also commonly opposed to *epiktētos*, it is possible that even Theophrastus glossed *thurathen* by *epiktētos*. It would not even have been unreasonable for him to use *epiktētos* in both possible senses, provided the context made the sense clear. In the generation after Aristotle there was no thought of a number of separate intellects with special names.¹⁴ But it is inconceivable to me that he could have confused the two different senses of “acquired” intellect.

The passage I have quoted above also contains an analogy between the intellect and light. I propose now to examine that, and then to look at the nearest similar analogies in our extant Averroes and Themistius, to consider whether it is plausible that Albert took it over from them, and whether the analogy is one that Theophrastus might have developed. I hope to show that Albert's account contains more than there is in Averroes and Themistius, and that in its fundamentals it could be derived from arguments of Theophrastus.

Before looking at the analogy itself it is worth noting that Albert talks of a fourfold (*quadruplicem*) intellect, not four intellects. This is appropriate for Theophrastus, who fully appreciates that Aristotle was trying to analyze *nous*, not to create a number of separate intellects in one individual. Later writers tended to hypostatization.

The analogy is set out in two sections, *De anima* p.183.85–184.7 and p.184.7–13, which I will call “A” and “B.” Allowing for the suggested lacuna about the acquired intellect in A, discussed above, we can draw up the following table:

	A	B
<i>possible</i>	<i>subjectum agentis luminis</i> (the subject of the light of the agent)	receives the light of the agent

<i>agent</i>	—	<i>denudat formas</i> (reveals, or abstracts, forms)
<i>theoretical</i>	1. the light of the agent <i>habitum ab ipso</i> 2. <i>ipsa denudatio</i>, which is actual thinking, when the light is over (<i>super</i>) the intelligibles	composed of agent and possible, like <i>diaphanum</i> <i>lucidum</i> (illuminated transparency)
<i>acquired</i>	— (lacuna?)	<i>fit splendore luminis habiti</i> <i>super intelligibilia</i>

This analogy has its origin in Aristotle, *De anima* 3.5 430a15–16—“The productive (*poietikos*) produces everything, like some *hexis*, as is light. For in a certain way light makes potential colors actual colors.” That is all we get from Aristotle, but the image was developed with enthusiasm by later writers. For some the sun analogy in Plato’s *Republic* is an additional starting-point, but we may avoid that complication by looking closely at Albert’s analogy and others that seem to be related to it, taking the reference to the transparent as crucial.

Working backwards in time we have first Averroes’ *Long Commentary*, which was certainly known by Albert. At p.410.639–411.707 we have:

The relationship of the agent intellect to the (material) is that of light to the transparent. For just as light is the perfection of the transparent, so the agent intellect is the perfection of the material. And just as the transparent is not moved by color, and does not receive it except when there is light, so the intellect does not receive the objects of intellect which are here except inasmuch as it is perfected through that intellect [i.e., the agent] and is illuminated through it. And just as light makes potential color actual, so that it can move the transparent, so the agent intellect makes potential thoughts [*intentiones*] actually thought by intellect, in such a way that the material intellect receives them.

This is a simple analogy: the material intellect is the transparent, the agent intellect is light, and the objects of intellect are colors. There is no reference to Albert’s theoretical intellect, nor to the acquired intellect or to Theophrastus and Themistius. The immediately following passage does indeed discuss the acquired intellect, but without continuing the analogy. The same simple analogy is mentioned shortly on p.450.198, and on p. 499.565–6 the material intellect is likened to the transparent, which receives light and color *at the same time*. That is all.¹⁵

Going back in time to Themistius, there is something different again. At *In De anima* p.109.4–5 he says that the potential intellect receives its proper form (*morphē*) when the productive (*poiētikos*) shines upon it, and at pp.98.35–99.3 that as light makes potential sight and potential colors actual, so the actual (*energeiai*) intellect not only makes the potential intellect actual, but also makes potential thoughts actually thought by it. There is no reference to the transparent here. That is, Themistius in this work has nothing approaching the developed analogy given by Albert. Neither he nor Averroes brings in the acquired intellect, and neither mentions Theophrastus.

It is reasonable, therefore, to assume that Albert had a different source that did mention Theophrastus, and the use of the transparent as the core of the analogy fits in well with Theophrastus' known interests. From Priscian, *Metaphrasis* pp.8–14 we can extract several quotations from Theophrastus about the transparent. As usual, Priscian is not easy to understand, and Theophrastus' remarks are largely aporetic, so that it is not easy to tell what positive view, if any, Theophrastus held. But he certainly thought hard about the transparent and could have formulated the analogy.

Most of Albert's analogy is easily understood, but what he says about the acquired intellect raises problems. First, what are we to understand by *splendor*? Albert is not very helpful. On p.110.18 he says that *luminare*, *lux*, *lumen*, and *splendor* differ, and gives interesting accounts of the first three but then gets involved in a long discussion of light and only perfunctorily returns to *splendor* at p.117.56–7. His account differs from that of John Blund, who in his *Tractatus de anima*, written soon after 1200, when only Avicenna among Arabic sources was available in Latin, says (p.32.27 Callus and Hunt) that Avicenna distinguished between *lux*, *lumen*, and *splendor*.

The following table sets out the various definitions:

Blund (Avicenna)		Albert
<i>luminare</i>	—	<i>corpus quod in se habet lucem</i>
<i>lux</i>	<i>perfectio translucentis</i>	<i>forma luminis in luminari</i>
<i>lumen</i>	<i>passio generata in translucente</i>	1. <i>quod receptum est in alio corpore illuminato et ideo</i> 2. <i>receptus habitus in natura diaphani</i> 3. <i>actus et perfectio (diaphani) secundum quod est diaphanum</i> 4. <i>color lucidi terminati</i>

5. *diffusio quae fit in superficie
et in profundo diaphani non
terminati
et ideo*
6. *actus lucidi pervii, quando
actu luminosum est*

<i>splendor</i>	<i>passio generata ex colore</i>	<i>divaricatio luminis super corpus</i>
	<i>aliquo in re translucente</i>	<i>politum et tersum</i>

In contrast, the Latin Averroes has nothing of this kind and has *lux* throughout, not *lumen*. Aristotle also used only one word, *phōs*, for light, and *lamprotēs*, which may be the equivalent of *splendor*, is not used by him as a technical term. Theophrastus only has *phōs*, but our material here is scanty.

Aristotle's definition of light (*De anima* 2.7 418b9–10) as "the activity of the transparent *qua* transparent" seems to be behind three definitions in this table—in Blund's as the definition of *lux*, in Albert's as the third and sixth definitions of *lumen*. All Blund's definitions use Aristotelian notions but Albert's are a strange mixture, some being Aristotelian while others seem independent and commonsensical. His account of *splendor*—"the spreading out of light over a polished and smooth body"—is of the latter kind and seems irrelevant to our analogy.¹⁶ John Blund's looks more promising but must be handled cautiously, because (1) it comes from Avicenna, and (2) taken with his account of *lumen*, makes *splendor* equivalent to "colored light," which does not seem to take us much further.¹⁷ In any case, Avicenna is much less systematic than Blund makes out, and, further, there seems to be no one-to-one correlation of Latin and Arabic words here.¹⁸

Another difficulty is with the word *habitus*. In A the theoretical intellect is like the light of the agent *habitu ab ipso*, and in B the light is *habiti super intelligibilia* in connection with the acquired intellect. Are these two senses or one? And is there a contrast between *habiti* in the above expression from B and *est* in A's remarks that the light *aliquando est super intelligibilia*? Is *habitus* in either A or B connected with the noun *habitus*, which is equivalent to *hexis*? I have so far failed to find an answer to these questions.¹⁹

There is another, quite different account of four intellects in Albert: at p.223.11–34 he says that through conjunction with the acquired intellect some men, like Hippocrates, know everything, and have what philosophers call a holy (*sanctus*) intellect. In them the possible intellect gets very close to the true intellect, which is the agent—their ability is called *subtilitas*. With the acquired intellect the discovery of the middle term is called *sollertia*. This is followed by a reference to knowledge of the future and to prophets.

All this comes, not directly acknowledged, from Avicenna.²⁰ Again, at p.225.6–14 he lists the four intellects and mentions *subtilitas* and *sollertia*, ending with *subtilitas* as caused *ex splendore intelligentiae super possibilem ex natura*; *sollertia autem est bona dispositio velociter inveniendi multas causas*. I do not think anything is to be gained by comparing this with the Theophrastus passage, but I have thought it worthwhile giving the preceding material to illustrate the problems involved.

To help understand the philosophical problem at the heart of the analogy let us consider Aristotle's problem, and how the light analogy fits in. Intellect knows abstract objects, but fitfully. Men start as babies and have to learn and to develop their intellects, and even when they are educated they sometimes sleep and sometimes forget, and are not always thinking. In Aristotle's terms, both babies and educated men have potentiality, but this is of two kinds: babies can acquire knowledge, and educated men, when asleep, can think but are not actually thinking. On one level, the distinction between potentiality and actuality is simply related to that between matter and form, as in the case of material objects. So we have form and matter in the intellect. But this is not enough; we need also the notion of first and second entelechy implicit in Aristotle's definition of the soul at 2.1 412a27,b5. This applies to seeing and other kinds of sensing as well as to thinking. Further, thinking and seeing both involve something other than themselves: they have objects, and this is where light comes in. It makes the potential actual both for sight and for visible objects. But light involves, for Aristotle, the transparent, and it fits the analogy neatly to make the theoretical intellect, which is composed of matter and form, like the transparent. In this way the first three aspects of the intellect, in Albert's terms—the possible, the agent, and the theoretical—are covered. But what of the *intellectus adeptus*? Taking it in the sense of Alexander's *epiktētos* we have to say that the transparent *develops*: we need a visual analogue for growing more clever—one might say that it either gets brighter or contains more objects.

A difficulty with the analogy is that whereas the objects of sight are external to the eye, the objects of the intellect are as it were within it; it does not "see" through the transparent, it is itself the transparent.²¹ This difficulty vitiates another idea that comes from John Blund. On p.93, claiming to repeat Aristotle, he says that the *intellectus adeptus* is the *imago rei-extra*: i.e., the image of the external object. This is not, in fact, Aristotle, and I cannot find anything really similar in Alexander, *De intellectu*, to which Blund's editors refer. If it is an attempt to fit *nous epiktētos* into the light analogy, it falls foul of the difficulty mentioned above, that the objects are not external.

One might make something of Albert's *fit splendore luminis habiti super intelligibilia* by taking *splendor* to mean the increased brightness of the transparency, and *habiti* to mean that the light is continuously held over the intelligibles. Thus the acquired intellect is that which involves as it were a bright light shining continuously over its objects. To put it another way, the educated man has thought long and hard, and his thoughts are clear.

The problem of why forgetfulness (and shifting attention) occurs remains, but that was a problem for any account of the intellect, as Theophrastus knew: "Why is it [the intellect] not always active? Why are there forgetting and deception and falsehood?" (Themistius *In De anima* 108, 27–8).

To sum up, I am suggesting that behind Albert's account was an analogy between light and the intellect developed by Theophrastus, in which four aspects of intellect discernible in Aristotle were involved. If it was developed in a sensible way at all, it must have been about *nous epiktētos*, not *nous thurathen*, and Theophrastus was merely elaborating on Aristotle's distinction between the original childish intellect and that of the educated man.²² If that is so, the expression *nous epiktētos* goes back before Alexander, who could well be using a term already in conventional use. That he does not mention Theophrastus here is only part of the larger puzzle why Alexander does not mention him at all in connection with *nous*. For Averroes, the Greek protagonists with rival interpretations of Aristotle were Theophrastus and Themistius on the one hand and Alexander on the other, but in the surviving works of these men there is little sign of that. Possibly Alexander said quite a lot about Theophrastus in his *De anima* commentary, now lost, just as he said a lot about his logical views in his *Prior Analytics* commentary. His own *De anima*, on the other hand, was very much concerned with Stoic views.

A tiny point is the similarity between Alexander's words in the passage about *nous epiktētos* (p.82.1), that it is a *hexis* and perfection (*teleiōtēs*) of the natural (*nous*), and Priscian, p.31.12–13, quoting Theophrastus: "It seems to be more [a matter of] *hexis*; and this as it were perfects the nature of *nous*." The idea involved that a *hexis* perfects something natural is not found in Aristotle himself. Do Alexander's words here derive from Theophrastus?

This kind of approach cannot get beyond possibilities, but, given that the attribution to Theophrastus is possible, we can press the way in which Albert introduces Theophrastus' name. That he is not making attributions casually is supported by the way he deals with his material. His *De anima* on the whole follows Aristotle's *De anima*, but contains many "digressions." The digression containing this material on Theophrastus and Themistius is preceded by one on Alexander, and followed by others on (1) Avempace and Abubacher,²³ (2) Averroes, (3) Algazel and Avicenna, (4) Avicbron,

(5) Plato and Gregory of Nyssa, and (6) "the Latins." The other digression about Themistius and Theophrastus again follows one on Alexander and is succeeded by others on (1) al-Fārābī and Avempace, and (2) Avicenna and Algazel. Where Albert's statements can be checked they are clearly related to the views of the philosophers named, and it seems unlikely to be different with Theophrastus and Themistius. We have here a systematic study that cannot be dismissed lightly. Albert goes into further detail: in our digression—after giving one argument (p.183.48–70) which is not found anywhere else, and another (p.183.71–4) which is in Averroes' *Long Commentary* p.390.98–104—he says: "in another place these men (*isti*) say," which suggests that at least two independent works were available to him or one of his sources.

We can deal much more shortly with another argument, which is in the second digression mentioned above. The aim is to show that the possible and the agent intellect, and the theoretical which is composed of the two together—the system we have already mentioned—are all uncreated, and that the composite intellect is joined to us (i.e. to individuals) through the intelligibles, which are related to the imagination, and so is capable of understanding intelligibles separate from matter. Albert says (p.217.48–55) that they (i.e. Theophrastus and Themistius) give a single (or singular?—*unicam*) argument for this, which is only a topical and probable one, from the topic of (more and) less. Alexander, *On the Topics* 2 (p.126.31–127.16), in a passage which probably comes from Theophrastus, discusses, with examples, the topic of more and less in a much more cogent way than does Aristotle (*Topics* 5.8 137b14–138a29). It is, therefore, a plausible claim that, as Albert says, Theophrastus argued thus:

It seems less likely that the intellect composed of two that are separate [from matter] should be about [*de*] an intelligible which takes in [*concupiente*] matter, than about an intelligible separate [from matter], which is similar to itself: yet it *is* about an intelligible joined with magnitude: so much the more, then, is it about an intelligible separate [from matter].

There is no trace elsewhere of such an argument, or of any other which is topical or dialectical, in connection with Theophrastus on the intellect. However, Themistius, p.115.5–9 has this: "However, this is not true [that what is in matter, i.e., the human intellect, cannot think about anything outside matter]. For this [the human intellect, undifferentiated] has the ability to think of what is not in matter at all. For that which separates enmattered forms from matter, and thinks of them, is more able to think of those that are separate [from matter]." This resembles a condensed form of Albert's argument, but does not mention Theophrastus. It can hardly be Albert's source. But Themistius twice (p.114.33 and p.115.10) refers to further

inquiries into this matter. Does this refer to a lost work which was Albert's ultimate source? Averroes, *Long Commentary* p.487.235-41 takes up Themistius' argument without further elaboration and gives Themistius' name only, so he too may be excluded.²⁴

Albert gives yet other arguments ascribed to Theophrastus and Themistius that cannot be traced to our Themistius, or anywhere else, and this confirms the suggestion that another work of Themistius was his ultimate source. This means that we must use some caution in trying to reconstruct Theophrastus' original argument. There may have been some reworking by Themistius such as we can see in the *De anima*, where he both quotes and interprets Theophrastus' words. Another example of his methods which is relevant to the subject of this paper is at p.102.11, where he misquotes Aristotle. Instead of: "... concerning the intellect and the theoretical faculty (*dunamis*)" (Aristotle, *De anima* 2.2 413b34-5), Themistius gives: "... concerning the theoretical intellect," introducing a speculative intellect when Aristotle is speaking of *nous* simpliciter. We must also allow for reworking by Albert himself, for he was clearly no timid pedant.

Albert is our major source of material, but there is also some in a much later writer, Denis the Carthusian (Dionysius Cartusianus), the Ecstatic Doctor (1402-1471) who, like Albert, worked in Cologne. His works have been published in forty-two volumes, but he has been little studied. As well as the standard references to Theophrastus on marriage that crop up throughout the Middle Ages and can be traced back to Jerome, he has several references to psychological and theological views that cannot so easily be accounted for. He claimed to be widely read; in his last work, *Protestatio ad superiorem suum* (vol. 41 p.625-6), he lists many of the authors he has read, including, as natural philosophers, "Plato, Proclus, Aristotle, Avicenna, Algazel, Anaxagoras, Averroes, Alexander, al-Fārābī, Abubather, Avempote, Theophrastus, Themistius, and others." Of these, he could hardly have had direct knowledge of Anaxagoras. He might have got it from Simplicius, to whom he refers elsewhere,²⁵ or more probably, he could be referring to Anaxagoras' views on *nous* which, through the *De anima*, had passed into the tradition and were firmly embedded in discussion of the intellect. It is equally unlikely that he had direct access to Theophrastus' views on the intellect—though he could have known Bartholomew of Messina's translation of the *Metaphysics* or even that of Bessarion—and it is significant that Theophrastus and Themistius, as so often, come together in his list. It is likely that he knew Theophrastus through Themistius.

Denis, *De consolatione philosophiae* 2.4.14 (vol. 26 p.218), says that there are two opposing views about Aristotle's views on the immortality of the soul: some said that the rational soul, which is the substantial form of man and truly gives form to his body, is mortal. These are Averroes, Abubather,

Alexander, Themistius, Avempote, Theophrastus, and "certain others," and also, among Christians, William of Paris (i.e., William of Auvergne, 1180–1249) and many others. Still others whom he names said the opposite, while "Henry"²⁶ said advisedly (*consulte*) that you could not tell from Aristotle's works what he thought. But all agreed that the intellect was immortal, bringing in the *Degen. anim.* passage, mentioned above, and that on Anaxagoras at *De anima* 3.4 429b23–5. Those who said that the soul was mortal, therefore, said that it was not truly and formally intellective, and had no inorganic power: its highest cognitive power was the passive intellect, i.e. the cogitative or imaginative power according to some, and it was not intellective unless through a certain shining of the light of the intelligence (*intelligentia*) over the passive intellect and its images. Denis concludes that the leader of this error was "the accursed and utterly damned Averroes."

All we can say of this is that at the core there could well be an argument of Theophrastus, who is the earliest philosopher mentioned. There is clearly a serious difficulty arising from the words of Aristotle about how the soul, as the form of the body, can be immortal; if it is not, how is it related to *nous*, which is clearly stated to be from outside? This is just the kind of problem that Theophrastus would have fastened upon, and the suggested solution, stripped of later accretions, could well be his, though he may have put it in the form of a suggestion rather than a firm answer.

Particularly Theophrastean are, perhaps, the following references:

1. The reference to the "cogitative or imaginative power" that may have links with Theophrastus' study of imagination (*phantasia*), which Priscian (pp.23–4) places between his studies of the senses and of intellect, and which included, according to Simplicius, an enquiry whether the rational imagination (*logikēn phantasian*) should be regarded as rational or irrational (*In De anima* p.286.30–32).

2. The reference to light, which fits in with what we have already discussed, though since the light analogy was extremely popular at all times we must not make too much of this.

Unlike Albert, Denis does not make it easy for us to evaluate his use of his sources. But it is reasonable to assume that he did not throw Theophrastus' name into the list entirely at random. Lists of views and their holders certainly existed before his time. There is, for example, the list of sixteen views on the agent intellect in the anonymous work *Beatitudo and the Agent Intellect* (of between 1308 and 1323, available in *Medieval Philosophy from St. Augustine to Nicholas of Cusa*, ed. J.F. Wippel and A.B. Wolter). That is much more than a list of names, and it is possible that similarly a short

account of Theophrastus' views on the immortality of the soul had passed into the medieval tradition.

In light of the amount of material that still exists unpublished it is possible that much more evidence about Theophrastus may yet be found, and I hope that I have given some indication of the problems and rewards that may be involved.²⁷

NOTES

I wish to thank Father Edward Booth O.P. for a very full reply to this paper, which he was unfortunately unable to deliver himself at the Liverpool Conference on Theophrastus. Many of his comments are given in the following notes.

1. Themistius *In De anima* p.108.11 seems to equate Theophrastus' *Physics*, Book 5 with his *De anima* Book 2. Since Priscian of Lydia, *Metaphrasis* p.22.34 also refers to "the fifth book," and Simplicius *In De anima* p.139.29 and p.286.31-2 to Theophrastus' *Physics* for psychological doctrines, we may accept this.
2. Themistius, p.108.8-10.
3. E.g., Charles B. Schmitt, "Theophrastus in the Middle Ages," *Viator* II (1971) 259, accepts this view without question.
4. It was translated into Latin by Marsilio Ficino, and printed in 1497.
5. Themistius' *De anima* "Paraphrase" was not translated into Latin until 1267, by William of Moerbeke.
6. E. Barbotin, *La Théorie Aristotélicienne de l'intellect d'après Théophraste* p.192 n.1. In the medieval context, "possible intellect" seems the best rendering for what both Albert and Aquinas referred to as the "intellectus possibilis". It is commonly referred to as the potential intellect. Father Booth points out that two years later, in "Autour de la noétique aristotélicienne," *Mélanges de Philosophie Grecque offerts à Mgr. Diès* (Paris 1956) 30-31, Barbotin took this to be a deliberate decision of Averroes. An additional complication is that H. Kurfess, "Zur Geschichte der Erklärung vom sog. *Nous Poietikos und Pathetikos*" (Ph.D. diss. Tüb. 1911) p.23 n.26, found Themistius' text as we have it confusing, and thought it distorted by later glosses. That leaves open the possibility that Averroes had before him a translation of a substantially different text which was that of Themistius' "Paraphrase" in a different form.
7. Themistius' "Reply to Maximus" on the syllogism was translated into Arabic and is now available in a French translation (A. Badawi, *La transmission de la philosophie grecque au monde arabe*, 166-180).
8. Jacob Mantinus was a Jewish physician from Spain who practised in Venice, taught in Bologna and Rome, and was consulted about the divorce of Henry VIII, coming out against it. He also translated the commentaries on the *Isagoge*, *Categories*, *De interpretatione*, the *Long Commentary on the Posterior Analytics*, commentaries on the *Poetics* and the *Republic*, and died leaving those on the *Topics* and the *Physics* unfinished.
9. Father Booth has doubts about Albert's reliability, saying that he had other concerns than the faithful rendering of texts; he had an overriding aim of establishing a synthesis of the "new" Aristotle with the established Christian theology. "Though Albert's speculative commentary on the *De anima* comes in

a lull between Averroism as a new curiosity and Averroism as a rallying cry for student dissent, he thought it appropriate to make long digressions on other Peripatetic positions in relation to Averroes": for a detailed application of this approach see note 15 below. M. Grignasci, on the other hand, in a study of al-Fārābī's logic and Albert's knowledge of it, says categorically that Albert never invented his citations (*Archives d'histoire doctrinale* 39 [1972] 66–67).

10. Through the kindness of Father Booth and Father Winfried Fauser S.J., I can say that there is no evidence of such a lacuna in any of the thirteen manuscripts available to Father Fauser which contain this passage.
11. Averroes, *Long Commentary* p.483.96 *quem vocat Aristoteles* (Alexander ms. A) *adeptus*, and Alexander *De anima* p.91.1–2 *hon kai thurathen Aristoteles legei* (Bruns wants to remove this section from Alexander's text); Averroes, *Long Commentary* p.445.56–7 *intellectum agentem secundum quod est adeptus, ut Alexander dicit*; *ibid.* p.484.147 has *adeptus agens* for Alexander, *De intellectu* p.108.23 *thurathen legomenos*. The Averroes passage is fuller than our Greek text of Alexander. Cf. Averroes p.483.11, which resembles Alexander p.110.13 but is not identical with it, and p.481.58–63.
12. Averroes, *Long Commentary* p.493.392–8. Al-Fārābī in his *De intellectu et intellecto* called *adeptus* an intellect between that *in habitu* and the agent intellect. The Latin translation of al-Fārābī's work is available in *Archives d'histoire doctrinale* 4 (1929–30) 115–26. There is also a translation of part of the Arabic text of the "Letter Concerning the Intellect," in *Philosophy in the Middle Ages*, ed. A. Hyman and J.J. Walsh (Indianapolis 1973). Father Booth, however, defends him against the charge of tortuousness, and it seems that in some works he tried to give an account of Aristotle's views and nothing more, but elsewhere Neoplatonic influence is clear.
13. To add to our confusion, Averroes' *Long Commentary* in the Latin of Michael Scot at p.390.84–6 Crawford, has no mention of *adeptus*, but twice for Scot's *factum* the renaissance translation of Jacob Mantinus has *factus seu adeptus* or *adeptus et productus* (suppl. vol. 2 f. 140c ed. a.1562–74), thus equating *factus*, *adeptus*, and *productus*. Again, at p.390.111 Scot has merely *intellectus qui est in habitu*, but Mantinus has *intellectus qui habitu existit (seu adeptus)* (f.140F). E. Gilson, "Les sources gréco-arabes de l'augustinisme avicennant," *Archives d'histoire doctrinale* 4 (1929) 5–158, discusses the *intellectus adeptus* in Alexander (p.19–21), Alkindi (p.25–26), Al-Fārābī (p.37–38), and Avicenna (p.73). But it remains unclear how *adeptus* got the meaning it did. Another inconclusive account is given by J. Finnegan, "Le texte arabe du *Peri nou* d'Alexandre d'Aphrodise," *Mélanges de l'Université St. Joseph* 33 (1956) 17–18.
14. That is not to deny that the material for a theory of several intellects is to be found in Aristotle's words, and that Theophrastus wondered how to interpret it.
15. Father Booth on the other hand, thinks it perfectly possible that Albert, in his "exuberantly creative" method of citation, started indeed with the Averroes passage I have quoted, but then brought in a reference to Theophrastus from p.389–90, which has certain important features in common with this one, but treats the theoretical intellect in some ways like what is elsewhere called the "acquired" (p.390.107–8). Since there are twenty Crawford pages between the two passages and since the similarities he notes are inevitable in a treatment of Aristotle's theory of intellect, I feel encouraged to maintain that my view is at least a possible alternative.

16. Albert *De intellectu et intelligibili* 1.3.1¹ (p.498b11–21 Borgnet), deals with *lux*, *lucere*, *lumen* in very similar terms, *lucere* being *emanare formam (luminis) in aliud*.
17. It is worth mentioning that Denis the Carthusian, *De lumine Christianae theologiae* 1.1 (vol. 33 p.292) says that Abubather said that the intellect was in us *non secundum substantiam, sed per esse quoddam*, in the way that the nature of light is *in corpore terso, pervio et polito, per esse cuiusdam resultantiae*.
18. See the Latin-Arabic lexicon in Avicenna Latinus, *Liber de anima* 4–5 (ed. S. van Riet and G. Verbeke, Louvain 1968).
19. Father Booth refers to Albert's commentary on the *Divine Names*, in which he refers to *acquirere habitum aliquem qui est intellectus adeptus* (*Opera omnia* vol. 37.1 p.134.78–9).
20. I have to thank Dimitri Gutas for this reference. See Avicenna Latinus op. cit. p.151–3.
21. Albert, *De anima* 3.2.5 p.184.42–3 has: "It is as if light came forth from sight giving *esse formale* to colours, and this was seeing."
22. In the *De intellectu et intelligibili* Albert sets out his own analysis of the intellect. He says (1.1.1 p.478a32–5 Borgnet) that he is using many books and letters by Aristotle's disciples. He treats the acquired intellect as a subdivision of the "formal" intellect and says straightforwardly: *intellectus adeptus est acquisitus per inventionem vel doctrinam et studium* (1.3.3 p.501a30–2). It is discussed in detail at 2.1.8 p.514b–516a. Other parts of Albert's analysis are heavily influenced by Arabic philosophers, but his view of the acquired intellect seems close to Alexander's.
At 2.1.4 p.509b24–5 Albert has been discussing color and the transparent as analogies for aspects of the intellect and concludes: *hoc ignoravit Theophrastus*. It is not clear how much of the discussion is covered by *hoc*. It could be only the very last statement: "That the possible intellect is not matter, but form." But it could equally well apply to the whole discussion of intellect and the transparent, implying that Theophrastus had used a different but related analogy. Father Booth has drawn my attention to Albert's *Summa de homine*, in which Albert, reporting Averroes, says that *splendor* is a *reflexio luminis procedens a reflexione radiorum*.
23. Albert clearly, here and elsewhere, treats Avempace and Abubacher as separate individuals. It is an illustration of the difficulties I have encountered in this area that Arabists appear to be divided about whether they are one and the same, which by the Arabic system of nomenclature would be possible, or different, in which case Abubacher would be Abu Bekr Mohammed ibn Tofail, sometimes known as ibn Tofail, who died in 1184 and was the author of the *Hayy ibn Yakzan*, a novel of which the hero has been described as "the personification of the human active intellect."
24. There is, however, at least one passage in Averroes' *De anima* commentary where some manuscripts give only Themistius' name, but others give that of Theophrastus. This is so at p.444.11 and 35 Crawford, where Crawford accepts only "Themistius," but "Theophrastus" is supported by James of Piacenza (*Lectura in III De anima*, p.231.15–234.7). It is therefore not impossible that Theophrastus' name may have dropped out elsewhere.
25. In *De quatuor hominibus novissimis* 13 (vol. 41 p.511 col.2B) he has: *ubi jam . . . Aristoteles . . . cum omni schola ac secta Peripateticorum, Avicenna, Andronico, Algazele, Themistio, Averroe, Alpharabio, Theophrasto, Simplicio? Simplicius? De*

- anima* commentary was first known and used by Pico della Mirandola about 1486, but the *Physics* was translated by Grossteste (d. 1253) and the *De caelo* by Grossteste and by William of Moerbeke (d. 1286).
26. The main contenders for being this Henry, are Henry of Harclay (1270–1317), who wrote *Utrum anima intellectiva sit immortalis* (*Medieval Studies* 19 [1957] 94–107), a detailed study of everything Aristotle said on this matter, as well as other views, and Henry of Ghent (ca. 1217–93), on whom see A. Maurer, *Medieval Studies* 10 (1948) 1–20. He seems to have been less specific on this subject, but he is the Henry who is the frequent object of Denis's praise. At least five other men named Henry wrote works on the *De anima* (see *Traditio* 24 [1968] 224–29).
 27. In all the confusion about the intellect it is refreshing to read Walter Burley, *De potentiis animae* 137, who gives a long list of “names” used by philosophers of the intellect. I quote (138): *intellectus formalis dicitur lumen intellectus agentis quia sicut lumen exterius est forma diaphani, sic lumen intellectus agentis est forma intellectus possibilis. Intellectus adeptus dicitur intellectus possibilis cum adeptus fuerit cognitionem multarum rerum, ut cum intellectus possibilis sit bene habituatus*. He then goes on to explain other “names” (*Medieval Studies* 33 [1971] 111–12).

8

Theophrastus on Tastes and Smells

Robert W. Sharples

I. THE SOURCES

Among the citations of Theophrastus in ancient secondary sources¹ there are a considerable number of passages, chiefly from Galen, relating to Theophrastus' views on the sense of taste and a rather lesser number from various authors relating to his views on smell. The references in Galen are to be found in his work *On the Constitutions and Powers of Simple Drugs*,² which is not surprising, given that taste in particular was a good guide to the properties of plants and their medical potential, or at least one of the best guides ancient medicine possessed. Galen points out that taste is more reliable than smell in this connection, though, one might add, more perilous.³

With the exception of Priscian's *Metaphrasis* (see below), this secondary material adds little of importance to our understanding of Theophrastus' doctrine concerning taste and smell as known from his surviving works. It is, however, of interest for another reason—for its relation to the surviving works and for what it can tell us about the way in which they were used by later authors. The work of Project Theophrastus has involved study of all citations of Theophrastus by name in later authors; an issue which has repeatedly arisen, particularly in the context of physics and biology, is whether a citation is a truly independent reference to a work by Theophrastus now lost, or whether it is only a more or less accurate reference to a work that is still preserved.⁴ It is from the need to decide on this issue in relation to the references in Galen, in particular, that the present paper has evolved. The material in Galen was neglected by Wimmer in his collection of Theophrastean fragments⁵—as was also that in the elder Pliny—and this, too, suggests that a review of the passages in question would be useful. I suppose that Wimmer might have neglected the references in *On Simple Drugs* in the belief that they added nothing at all to the extant works; but he also disregarded other references to Theophrastus in Galen, though it must be admitted that many of these are very general in character.⁶

As indicated above, in studying Theophrastus' views on taste and smell we are not primarily dependent on secondary evidence; it may therefore be useful to summarize the situation briefly. Diogenes Laertius, in the first section of his list of Theophrastus' works,⁷ refers to *Peri odmōn* (*On Smells*) in one book which survives, and also to a work *Peri chulōn* in five books.⁸ Galen tells us that Theophrastus used *chumos* for "taste" and *chulos* for the concocted combination of the moist and the dry that possesses the taste;⁹ this seems to be borne out by Theophrastus' surviving works,¹⁰ and so *Peri chulōn* should be translated as *On Juices* rather than *On Tastes*. Diogenes refers not only to *Peri chulōn* but also to another work: *Peri chumōn, chroōn, sarkōn* (*On Flavors, Colors, and [types of?] Flesh*);¹¹ this comes out of its proper alphabetical place in Diogenes' list, immediately after *Peri eidōlōn* (*On Images*), and so it seems likely that, as a number of scholars have suggested, it formed part of a collection of works concerned with criticism of the atomic theory of Democritus.¹² Diogenes also mentions a work by Theophrastus *On Wine and Olive Oil*.¹³ This, too, is lost. However, there is much information relating to tastes and smells in the sixth book of the *Explanations of Plants*.¹⁴ Theophrastus draws a distinction between natural tastes and smells, discussed there, and those produced artificially, which he reserves for subsequent discussion.¹⁵ Einarson, in the introduction to the Loeb edition of the work, suggests that Theophrastus dealt with artificial flavors in the lost book seven of the *Explanations of Plants*, and with artificial odors in the extant *On Smells*.¹⁶ Since Diogenes lists eight books of the *Explanations of Plants*,¹⁷ as opposed to the present six, Einarson presumably counts *On Smells* as book eight; it is not clear whether the fact that Diogenes lists it separately constitutes a difficulty here or not.¹⁸ Regenbogen had supposed that *On Smells* was treated as book seven of the *Explanations of Plants*, and *On Wine and Olive Oil* as book eight, because there is a reference forward in book six to a specialized discussion of wine.¹⁹ At the beginning of *On Smells* Theophrastus does undertake to speak about artificial odors "as also about [artificial] flavors";²⁰ the wording is perhaps ambiguous, but it probably constitutes a reference *back* to a discussion of artificial flavors, which would support Einarson's theory.²¹

It is unclear, moreover, how Diogenes' report of the *Peri chulōn* is to be fitted into all this. Since he says that the work comprised five books, it is difficult to suppose that it could in its entirety have formed any part of an eight-book *Explanations of Plants* including our present six books; it would be wrong to suppose that book divisions and the number of books in a particular work were immutable, but the discrepancy seems too great. Thus, it is difficult to speculate about the contents of *Peri chulōn*. Certainly a comparison of *Explanations of Plants* 6 with *On Smells* would suggest that we would be unlikely to find general remarks about types of flavors, as

opposed to detailed discussion of particular examples, predominating in *Peri chulōn*, if that work was similar in character to *On Smells*; but that is what we do not know. Nor is it clear that *chuloi* (juices) necessarily implies a restriction to natural, as opposed to artificially produced flavors.

At the beginning of *Explanations of Plants* 6 Theophrastus refers to a previous discussion of the nature of tastes and smells, and in particular of the fact that both arise from mixtures.²² This point is indeed made in *On Smells*;²³ but since the reference at the beginning of *Explanations of Plants* 6 is a reference back, while those at the end are references forward,²⁴ it seems likely that the reference at the beginning of the book is not to *On Smells* and some parallel discussion of taste but rather, I would suggest, to Theophrastus' treatise *On the Soul*, which counted as books 4 and 5 of his *Physics*.²⁵ These books did not survive, but we do have parts of the *Metaphrasis* by Priscian of Lydia, which, in addition to a great deal of Neoplatonic theorizing, does preserve some passages of the original work. And we do have Theophrastus' treatise *On the Senses*, probably part of his work *On the Opinions of the Natural Philosophers*;²⁶ this is chiefly an account of the views of others, but does incidentally contain information about Theophrastus' own views.

II. TASTE

Like Aristotle,²⁷ Theophrastus attributes flavor to the effect of the dry upon the moist; it is either a mixture of the dry and earthy and the moist, or an infusion of the dry through the moist under the influence of heat, which may come to the same thing.²⁸ In the case of plant flavors, this influence of heat is through the process of concoction.²⁹ If a substance is to have a taste, it must be a mixture of more than one ingredient;³⁰ and an excess either of moisture or of dryness removes taste.³¹ Both for Aristotle and for Theophrastus the tongue tastes by means of moisture;³² and Galen, in his treatise *Against Lycus*, remarks that for Theophrastus flavors are differentiations of the moist.³³

In *Explanations of Plants* 6.1 Theophrastus gives a list of eight flavors: sweet (*glukus*), oily or rich (*liparos*), rough or harsh (*austēros*), sour (*struphnos*), pungent (*drimus*), salty (*halmuros*), bitter (*pikros*), and sharp or acid (*oxus*).³⁴ However, in 6.4, after repeating the list, he observes (6.4.2) that there will only be seven if the salty is identified with the bitter, just as there will only be seven colors if grey (*phaion*) is not distinguished from black; and the number seven, he claims, is most natural (*kuriōtatos kai phusikōtatos*)—a statement which has caused commentators some surprise.³⁵

Aristotle, in *De sensu* 4, mentions the same eight flavors as Theophrastus and proposes to reduce them to seven either by eliminating the rich taste

(for "the sweet taste alone is rich") so that rich and sweet can be identified, or by eliminating the salty, which "is almost the same as the bitter." Similarly, he proposes to reduce the number of colors to seven by identifying either grey with black or yellow (*xanthon*) with white.³⁶ However, while he does repeatedly stress that the number of types of flavors, odors and colors is limited,³⁷ he does not explicitly describe the number seven as "most natural," as does Theophrastus. The latter also says, without specifying them, that there are seven types of odor;³⁸ this is the more surprising because both he himself elsewhere³⁹ and Aristotle⁴⁰ say that it is harder to be precise about odors than it is about flavors.

Seven of the eight flavors, with the exception of the rich or oily, are already mentioned by Plato in the *Timaeus*,⁴¹ and a link is already drawn there between salty and bitter. Aristotle gives the full list of eight in the *De anima*, as well as in the *De sensu*; but there is no desire here to restrict the number to seven, and we are simply told that the rich is *adjacent* to the sweet and the salty to the bitter.⁴² Both Galen⁴³ and Oribasius⁴⁴ compare Theophrastus' list with Plato's and say that Theophrastus has added the rich taste, although it is already there in Aristotle; this may suggest that for Galen and Oribasius Theophrastus was a more natural source than Aristotle in connection with such topics.

Galen himself recognizes *stūphon* (astringent) as the common genus of the harsh and the sour tastes;⁴⁵ he interprets Plato in the *Timaeus* as holding that the harsh and the sour are the same in kind and differ only in that the latter is an intensification of the former.⁴⁶ He further remarks that "the associates of Theophrastus" (*hoi peri ton Theophraston*)—a type of phrase which is often simply a roundabout way of referring to the person named⁴⁷—did not mention this common genus.⁴⁸ This seems to be true as far as Theophrastus himself is concerned, and perhaps the less surprising in that he connects sourness with (relative) dryness and harshness with (relative) moisture.⁴⁹ He does however use the verb *stūphein*, from which Galen's term is derived.⁵⁰

Galen also tells us, in connection with the watery taste, that Theophrastus mentioned many varieties of taste, enquiring whether there are many different kinds of sweet taste or whether the difference is only one of degree.⁵¹ We know from elsewhere that difference in kind and difference in degree were not necessarily mutually exclusive for Theophrastus.⁵² In *Explanations of Plants* 6.9.2 Theophrastus mentions various sorts (*ideai*) of sweet taste, such as the honeylike, winelike, milklike and watery, and says that they may differ in degree but more properly by the mixture of the underlying ingredients. This may seem hardly to amount to an "enquiry" (Galen's word is *zētōn*) and more to a mere glance at the question, but it may still be the passage that Galen has in mind. Earlier, in the passage in *Explanations of Plants* 6.4

where the eight flavors are enumerated and reduced to seven, Theophrastus refers to the milklike taste as a distinct kind (*eidōs*) of sweet taste, while still including it under the heading of the sweet. In the same passage he also considers whether the winelike taste should not be added to the principal ones he has enumerated, incorporating as it does sweetness, sourness, and harshness; however, he decides to stay with the seven.

The reference to tastes differing because of the mixture of the underlying ingredients is striking, but there is no explicit suggestion of a quantified analysis such as Aristotle proposes in the case of colors in his *De sensu*.⁵³ Colors are there explained in terms of ratios of white and black; the corresponding primary opposites in taste are for Aristotle sweet and bitter.⁵⁴ Theophrastus does make some reference to these primary opposites,⁵⁵ but he devotes more explicit discussion to a suggestion made by Aristotle somewhat in passing that, as the sweet and the rich are the flavors of foodstuffs, these may be the primary flavors and the others privations of them.⁵⁶ Theophrastus has some doubts about this, because some plants have a more bitter taste the more fully developed they are,⁵⁷ and also because different foodstuffs suit different creatures;⁵⁸ however, he seems prepared to accept it as a general truth.⁵⁹

Galen tells us that according to Plato, Aristotle, and Theophrastus the pungent taste is the hottest.⁶⁰ It is true that the pungent is the only flavor in connection with which Plato mentions heat,⁶¹ but it is not clear that there is anything to justify Galen's statement in the extant works of Aristotle or Theophrastus. Theophrastus does link *fragrance* with heat;⁶² he associates fragrant chiefly with bitterness in taste⁶³ but also on occasion with pungency among other tastes.⁶⁴ Aristotle regards pungent flavor as one of those that are intermediate between the extremes of sweet and bitter, though the comparison is not in terms of heat and its absence.⁶⁵

Priscian tells us that Theophrastus followed Aristotle in holding that the tongue is not the true organ of taste but rather the medium through which we taste;⁶⁶ and that he raised the question how it is that we taste bitter and sweet simultaneously with the same part of the tongue,⁶⁷ though in the latter case Priscian does not report what answer Theophrastus gave.

III. EXPLANATIONS OF PARTICULAR FLAVORS

A very considerable proportion of Galen's references to Theophrastus occur in contexts where Galen is claiming that his own views on very general issues—notably the theory of the four humors and of the four primary opposites—are in accordance with those of all major philosophers and doctors, while those of his hapless opponents are not. An example may give the general tone; after giving a list of authorities, including Theophrastus,

Galen continues: "None of these, most rash Thessalus, condemned the views of Hippocrates about the nature of man; views which you do not seem to me to have read in the first place—or, if you *have* read them, you have not understood them."⁶⁸ It was no doubt the frequent inclusion of Theophrastus in these lists of authorities by Galen that in turn led the sixteenth-century Theophrastus Bombastus von Hohenheim, better known as Paracelsus, sometimes to abuse his ancient namesake along with Galen.⁶⁹

Galen's citations of Theophrastus in connection with plant flavors are rather different in character. They appeal to Theophrastus for (relatively) specific points; what is not always easy to decide is whether Galen, in the course of developing his own argument, is loosely and from memory appealing to Theophrastus where individual observations by the latter will help to support Galen's argument, or whether on the other hand we are to suppose that he is giving an accurate representation not just of individual points for which support can be found in Theophrastus, but of a whole line of thought—in which case we may be compelled to suppose that he is quoting accurately from some work now lost, rather than just alluding loosely to an extant text. The fact that so many citations of Theophrastus in Galen's *Simple Drugs* can be linked more or less confidently with *Explanations of Plants* 6 does perhaps have some cumulative force, the more certain cases making it likely that this is the correct interpretation in the less certain cases as well.⁷⁰

Galen discusses the ripening of fruit in a passage which mentions Theophrastus by name twice. It seems desirable to set the passage out in full (*italics added*):

All the tree-fruits that seem sweet to us when they have ripened are sour when they have just been produced, and dry in constitution, each in accordance with the nature of the tree that produced it, *as Theophrastus somewhere said*—olives, grapes, apples, pomegranates, mulberries, dates, pears. But as time goes on they become moister, and sharp as well as sour; and then gradually losing this (sharpness) they become sweet and reach their maturity. Some do not even acquire sweetness on the trees, but some time after they have been removed;⁷¹ and certain others do not pass through the intermediate stage of sharpness, but direct from sourness to sweetness, as does also that of the olive-tree.⁷² Now, that they are all ripened by heat is clear; that this is of two types, the one the peculiar and innate heat of each thing, the other from outside and from the sun, but linked in nature to the fruits and proper to them [*sumphuton kai oikeion*]⁷³—this I suppose we are well aware of if we remember the basic principles which we constantly presuppose. But if they are somewhat sour to begin with, but become sweet when they ripen, their sweetness is the result of heating and the sourness and sharpness of their being cold. Moreover, since at the beginning when they are still woody, *as Theophrastus too said*, they are at the same time

dry and sour, but the large amount of moisture that flows into them makes them sharp, it is clear that the sour flavour involves more earthy matter, the sharp more moisture—so that Plato too defined them rightly, saying that, when all such earthy particles which are contained in juices are dissolved, and contract and dry up those of the perceptive parts of the tongue that are moist, “if they are rough they appear sour, but if they are less rough they appear harsh”⁷⁴ (Galen, *On the Composition and Powers of Simple Drugs* 4.7 vol.11 p.636.18–638.9 Kühn).

There are points in this passage that are reminiscent of *Explanations of Plants* 6 over and above those for which Theophrastus is actually cited. The flavors of plants and fruits are, for Theophrastus, the result of concoction by the internal heat of the plant and the external heat of the sun,⁷⁵ which causes progressive changes in flavor, though the process has more stages in some cases than in others.⁷⁶ Fruits display the flavors of the juices of the plants on which they grow, but less so the riper they become.⁷⁷ Nevertheless, Galen is using this material to develop points of his own, and that may be a warning against supposing that he is necessarily following any single source. He links sweetness with heat, sourness and sharpness with cold: sourness with dryness, sharpness with moisture. But he illustrates sourness and sharpness by a quotation from Plato’s *Timaeus*; and that may suggest that he is developing his own ideas eclectically rather than reproducing someone else’s. (There is, of course, the possibility that the quotation from Plato, too, comes from his source.⁷⁸) But if the train of thought is partly Galen’s own, the fact that not every detail in the passage can be paralleled in Theophrastus’ *Explanations of Plants* 6 becomes less of an objection to the claim that it is that book, rather than some other work of Theophrastus now lost, that Galen has in mind—however vaguely—at the points where he does cite Theophrastus by name.

It is important to determine exactly what Galen is attributing to Theophrastus at those points. In the first part of the passage, he could be attributing to Theophrastus the claim that (1a) fruit in its initial stages is sour and dry; or that (1b) the sour flavor and dry constitution differ in kind according to the type of tree; or that (1c) the fruits are more like the tree in flavor at this stage than later; or even that (1d) the maturation process varies with the type of tree. On its own (1a) requires an unnaturally restrictive reading of what Galen says; conversely, (1d) goes beyond what he explicitly attributes to *Theophrastus*, though it is certainly implied by what he goes on to say. The possibilities do not exclude one another; (1c) implies (1b), if the constitution of different trees is different, and also (1a), if—plausibly enough—one regards trees as drier in constitution and sourer in taste than ripe fruit. The obviousness of (1a) should not in itself be an objection to supposing that Galen, with his fondness for dragging in authorities at every

point, is citing Theophrastus for this alone; but as we shall see it does not seem necessary to suppose this.

Similarly, in the second passage the point for which Galen cites Theophrastus could be (2a) that fruit in the initial stage is dry and sour, or (2b) that fruit in the initial stage is woody, or (2c) that fruit in the initial stage is woody, dry, and sour, or (2d) that fruit in the initial stage is dry and sour *because* it is woody. With these options in mind, let us look at *Explanations of Plants* 6.6 (again, my italics):

As to why each plant, or rather each of all things which possess flavours, possesses that which it does—for example sweet or bitter or rich—it is *their initial constitution which must be held responsible*. . . . [2] Sweet tastes, and in general those of edible things, and fragrant odours, are produced by some process of concoction, and, in general, things which are concocted (are more pleasant in taste and smell) than those which are unconcocted, each being concocted in its own proper way. . . . [3] All (plants), during the production of their flavours, change from one flavour to another according to their concoction. In general terms (they change) from those which are privations to those which are in accordance with form, that is from bitter and sour to sweet and rich, and (to) any other that there may be co-ordinate with these;⁷⁹ *in individual terms (they change) in accordance with their distinct nature, and some (go through) more flavours, others through fewer. For some change from being bitter, like the olive, which ends up as sour; others from being sour, like pears and the rest. And those that are sharp, too, are previously sour. Others change first from sour to sharp and then from sharp to sweet, like the grape.* [4] For, speaking in general terms, it is this and wine-like flavours in general that undergo the most changes. *At first it is as it were watery*, then sour, then sharp, and finally sweet. And similarly the mulberry; from sour it becomes sharp and from sharp sweet. And this happens with other plants too; for the sharp taste is closest to wine-like sweetness. Moreover, for this reason those who wonder why the mulberry is sharper when it is red than when it is white, though it is closer to concoction (in the former case), are not right to do so; for at that time there is as it were the production of its own proper flavour, but when it is white its sourness is more distant (*sc.* from its eventual flavour) and unspecific. And for this reason when it is at that stage it is drier; but when it turns red it becomes moist and as it were juicy. [5] For in general *every seed-case*,⁸⁰ *being dry at first, becomes moist*, and this is what produces juices, when moisture is constantly flowing in and as it were percolating through, and always increasing (the amount of juice). *And this is why most fruits are sour at first, not unreasonably, since they are dry (then).* Of moist (fruits) those seem driest of which the moisture is milky, as in the case of figs, (and this is) because of its thickness. So for these (fruits) the (flavours) that are privations, from which the change to concoction takes place, as it were play the part of matter; but for others these are as it were the essence and the goal. For many are naturally bitter or sour or sharp, and of these the moisture is less juicy in the first place. [6] *And*

all fruits in a way display the flavour [literally "flavoured juice," chulos] of the plant, too, which is perhaps inevitable as they have come to be from it; but they do so more when they are unripe and less when they are ripe, because the (moisture) which is separated out (and flows into them from the plant) is constantly becoming more pure.

It does not seem too difficult to find *all* of the possibilities for Galen's first reference to Theophrastus in this passage. (1a) is stated in section 5, though Galen applies to "*all* the tree-fruits that seem sweet to us" what Theophrastus only asserts of "most [fruits]." (1b) is arguably implied by sections 3–4. It is true that where Galen seems to speak of different types of sour initial taste, Theophrastus gives examples of bitter (the olive), sour (pears) and watery (the grape) initial tastes; at the same time, the contrast between the initial tastes of pear and olive is common to both authors, even if analyzed differently. That not all the fruits on Galen's list are mentioned by Theophrastus here hardly seems a very strong objection to supposing that it is this passage that he has in mind. (1c) is explicitly stated in section 6, and (1d) in section 3.⁸¹ As for the second reference in Galen, (2a) is the same as (1a), and the same remarks apply. (2c) is not explicitly stated; indeed, "woody" does not appear anywhere in our Theophrastus passage. But Theophrastus does relate the initial sourness of the fruit to its dryness, and since Galen's first reference to Theophrastus suggests that it is at least partly in terms of dryness that he interprets Theophrastus' view that the fruit is more like the parent tree to begin with than later, it is not too difficult to suppose that it is our Theophrastus passage that he has in mind and that he has simply added "woody" as equivalent to "dry like the parent tree." In that case Galen's derivation of dryness and sourness from woodiness (2d)—or perhaps better of sourness *when* dry from woodiness—is not very far removed from Theophrastus' derivation of sourness from dryness. It does not then seem implausible to suggest that it is *Explanations of Plants* 6.6 that Galen has in mind in the passage cited.

It is important, however, to note the differing emphases of the two passages. Theophrastus is concerned to analyze the different stages of maturation that different types of fruit pass through in terms of privation and form, whereas Galen is concerned to find evidence that will enable him to correlate the different flavors with the primary opposites hot, cold, wet, and dry. The link between sourness and dryness is common to both, but the connections drawn by Galen between sweetness and heat and between sharpness and moisture are at best only implied in this passage of Theophrastus. The connection between sweetness and heat is indeed implied by the general connection between sweetness and concoction (sections 2 and 3), and Theophrastus does elsewhere link sharpness and harshness with moisture, pungency and sweetness with dryness.⁸²

Galen cites Theophrastus and Aristotle as saying that it is the heat remaining in fruit from the sun that causes the seething of fruit juices and the fermenting of wine.⁸³ A similar point is made in the pseudo-Aristotelian *Problems*.⁸⁴ Theophrastus does in the *Explanations of Plants* refer to the heat from the sun, as well as the innate heat, as contributing to the ripening of fruit,⁸⁵ and he also states that the ripening continues after the juice has been removed from the fruit or the fruit from the tree.⁸⁶ But he does not as far as I know explicitly state that the heat *from the sun* is as it were stored up in the fruit. Aristotle and Theophrastus are also cited for the view that vinegar has lost the innate heat that it had as wine but has gained new heat from corruption;⁸⁷ Theophrastus mentions the changing of wine into vinegar in *Explanations of Plants*,⁸⁸ but does not make this point. No doubt it is another work by Theophrastus—*On Wine and Olive Oil*?—that Galen has in mind. He goes on, without specifically mentioning his sources, to compare to the production of vinegar the production of lye by steeping ashes in water; both Aristotle and Theophrastus link the taste of ashes with the previous presence of a fiery element,⁸⁹ and Theophrastus in his work *On Waters* probably followed Aristotle⁹⁰ in attributing bitterness in water to its having flowed through ashes or substances with a similar effect.⁹¹ Theophrastus wrote a work *On Soda, Salts, and Alum*.⁹²

"The associates of Theophrastus and Aristotle" are cited by Galen for the effect of warmth on wine; it speeds the maturing of good wine but causes that which is inferior to deteriorate more rapidly, whence Galen draws an analogy with the effect of sun and exercise on healthy bodies and inferior ones.⁹³ This again probably comes from *On Wine and Olive Oil*; Theophrastus does not make this point in *Explanations of Plants* 6 and in fact says there that the heat of the sun brings immature plant juices to maturity but causes those already ripe to deteriorate.⁹⁴ Plutarch tells us that Theophrastus attributed the fact that areas with pine trees produce sweet wine not to any direct effect of the pine trees on the wine but to the fact that pine trees grow in clay soil, which is warm and hence leads to more perfect concoction of the wine.⁹⁵

Galen refers to the presence in olive oil of two residues in addition to the pure oil itself, an earthy residue and a watery one, and cites Theophrastus for the view that these two types of residue are contained in all plant juices.⁹⁶ Theophrastus does refer to the blowing away of a watery element and the settling out of an earthy one in connection with the flavor of plant juices in general⁹⁷ and the fragrance of wine;⁹⁸ but he does not in these contexts speak of residues, and indeed he seems elsewhere to endorse Aristotle's view that there are no residues in plants, which, as it were, use the earth as a stomach.⁹⁹ The absence of residues in plants may be only relative—it occurs in the context of a contrast between plants and animals—and Theophrastus

does on occasion speak of residues in connection with plants as well.¹⁰⁰ So Galen's remark can be taken as a report of Theophrastus' views in *Explanations of Plants* 6, though, once again, a rather freely expressed one.

Theophrastus' explanation of the saltiness of the sea is reported to us not by Galen but by Olympiodorus, who draws a distinction between Theophrastus' view that the saltiness of the sea is caused by the underlying earth, and what he describes as the "Peripatetic" view, that of Aristotle himself,¹⁰¹ that it is caused by the smoky exhalation from the surrounding land, flavoring the subsequent rain.¹⁰² Both theories fit with the claim, common to both thinkers, that flavor is caused by the action of the dry upon the moist.¹⁰³ In *Explanations of Plants* 6.3.1 Theophrastus comments only that salt water contains a mixture of other substances, a point which is also made by Aristotle¹⁰⁴ and in the pseudo-Aristotelian *Problems*.¹⁰⁵

IV. SMELL

For Theophrastus, as for Aristotle, there is a close connection between taste and smell, though the sense of smell is less precise.¹⁰⁶ Smell is caused by the dry part of taste, in what is transparent¹⁰⁷—in what is transparent, because smell can travel through water as well as through air. Aristotle pointed to sea creatures that do not respire, yet have a sense of smell, as evidence that smelling does not occur through a dry exhalation from the source of the odor; the connection of breathing with smell in those creatures that do breathe is accidental, respiration serving to open up the organ of smell.¹⁰⁸ Theophrastus in his *De sensibus* makes a similar point against Empedocles' explanation of smell in terms of respiration;¹⁰⁹ he also appears to argue there, against Empedocles' explanation of smell in terms of effluences, that if this were correct, strong-scented substances would perish more quickly than others, which is not in fact the case.¹¹⁰ One might then suppose that he follows Aristotle¹¹¹ in explaining smell not in terms of any material effluence from the object of smell, but rather in terms of a change effected in the intervening medium—as in the case of the Aristotelian theory of sight, with the difference that in the case of smell the propagation of the change need not be instantaneous.¹¹²

There is, however, a problem. Theophrastus himself does on occasion speak of an exhalation from the object of smell;¹¹³ and when he argues that some flowers smell sweeter at a distance because the coarser and earthier effluence of other parts of the plant fails to travel so far,¹¹⁴ it is difficult, though not perhaps impossible, to suppose that the fragrant smell as well as what interferes with it is not being explained in terms of a material effluence.¹¹⁵ Moreover, in spite of his objections to Empedocles' explanation of smell in terms of respiration, he himself in the *De odoribus* appears to

say that smelling consists of respiration.¹¹⁶ He does so in order to explain the connection of fragrance with what is fine and least earthy; and it is at least difficult to interpret this argument simply in terms of smell as a modification of the intervening air, with no material exhalation. The persistence of rose-perfume is also explained by its being lighter and hence more able to penetrate and fill the pores of our organ of smell,¹¹⁷ which certainly sounds like an explanation in terms of material effluences.

Stratton suggests that Theophrastus in the *De sensibus* abandoned his interpretation of smell in terms of respiration under the stimulus of a desire to attack Empedocles.¹¹⁸ But, apart from its inherent implausibility, this fails to recognize that the view that respiration simply serves to open the pores of the organ of smell is also attributed to Theophrastus in Priscian's *Metaphrasis*.¹¹⁹ It is in fact the question of material effluences, rather than that of the role of respiration, that is the central issue in any case;¹²⁰ even if one held that smelling is the perception of material particles in the air—rather than of some change in the air itself as for Aristotle—one might still argue, and perhaps one *should* still argue, that the process of respiration simply serves to bring the air and the particles it contains into contact with the organ of smell. It may be difficult to explain how smell and taste are different for fish, both being the sensing of particles in the water, except in terms of their having a different sense-organ; but that seems to be a problem, if it is one, for Aristotle's theory as well.

It has been suggested by Dr. David Sedley that in the *De sensibus* Theophrastus is arguing against Empedocles' general theory of effluence and not against an effluence theory of *smell*,¹²¹ but even if this suggestion is accepted, there remain obstacles in the way of attributing a consistent effluence theory of smell to Theophrastus. First, and more important, Priscian in the *Metaphrasis* cites him as saying "smell seems to occur through the air being mixed (with it) and affected, but hearing (through its) being given a shape."¹²² At first sight this passage might seem to favor an effluence theory, speaking as it does of mixture and drawing an apparent contrast between the modification of the medium—the air—in the case of sound and what happens in the case of smell. However, it does explicitly state that the air is affected by what is mixed with it; it is not simply a vehicle conveying material particles. One might try to reconcile all the evidence by supposing that Theophrastus did indeed hold that smell was caused in the first instance by material effluences from the object of smell, but that the role of these effluences is not to affect us directly but rather to affect the intervening air.

It would still be difficult to reconcile this rather tortuous explanation with passages that seem to explain particular phenomena to do with smell in terms of penetration of our sense-organs by the odor. Gottschalk, who

points out the discrepancy between such passages and Priscian's account, connects it with a tension he detects elsewhere between Theophrastus' more theoretical works on the one hand and his detailed discussions of particular phenomena on the other.¹²³ Perhaps a tension between the two explanations of the transmission of smell can even be detected within *Explanations of Plants* 6.1 itself. Theophrastus' statement of the relation between the dry part of taste and the transparent, in the definition of smell, requires a noun to be supplied from the preceding definition of taste; and what Theophrastus actually spoke of there was "either a mixture of the dry and earthy and the moist, or an infusion of the dry through the moist . . . which may come to the same thing." Is it perhaps not entirely accidental that, where smell is concerned, "mixture" suits an exhalation theory better, and "infusion," or perhaps better "transfusion" (*diēthēsis*, "straining through"), might not be entirely inappropriate to an explanation in terms of an alteration in the medium? If so, it may be significant that Theophrastus at any rate does not think the distinction important.

However that may be, there are also further passages that suggest at least an interest on Theophrastus' part in the formulation of the Aristotelian theory. Such interest does not in itself prove that he himself ever subscribed to that theory, still less that he always did; but it may still have some weight.

Although it is the transparent substances air and water that are affected by the dry so as to produce smell, it is not *qua* transparent that they are affected; for if it were it would be possible for us to hear smells or see sounds.¹²⁴ Aristotle gave no name to the quality air and water have in common which enables them to be the vehicles of smell;¹²⁵ but we are told by Philoponus that Theophrastus coined the expression *diosmon*, "trans-odorant," on the analogy of *diaphanes*, "transparent"; he also invented the term *diēches*, "trans-sonant," for that which transmits sound.¹²⁶ It is possible that Theophrastus coined the term *diosmon* to fill a gap in the Aristotelian terminology, but understood it in terms of "conveying material effluences," and that Philoponus—whose main concern is after all to interpret Aristotle—failed to note the difference; but this hardly seems likely.

Philoponus' information is repeated, as far as *diosmon* is concerned, by two passages in the *Suda*, which also state that the organ of smell is not the nose but the "breast-shaped offset" of the brain—that is, the olfactory bulb—situated, one passage adds, above the ethmoid bone at the top of the nose.¹²⁷ The latter information also appears, without any source being named, in another group of passages in Philoponus.¹²⁸ "Ethmoid," *ethmoeidē*, seems to be the correct reading. The manuscripts of the *Suda* give *homoieidē* "similarly shaped," i.e., in context, "breast-shaped"; those of Philoponus apparently vary between *mastoeidē* "breast-shaped" or *ithmoeidē* (sic), which the *editio princeps* corrected to *isthmoeidē* "isthmus-shaped." But *ethmoeidē*,

meaning "sievelike," is the technical term, and the difference between it and *ithmoeidē*—especially in Byzantine pronunciation¹²⁸—is very slight. Galen, too, refers to the bone in question as the ethmoid bone, though expressing a preference for the term "spongelike," which he attributes to Hippocrates.¹²⁹

In the two Suda passages, where the information about the organ of smell follows that about the term *diosmon*, no authority is cited for the information about the organ of smell. Nor, as we have seen, is any authority named for this information in Philoponus.¹³⁰ In a third Suda entry the information about the organ of smell is attributed to Theophrastus, but it looks as if the name of Theophrastus has been transferred here by a confusion from the information about the term *diosmon*, where it did belong, to that about the organ of smell, where it did not.¹³¹ Its source is thus uncertain; Galen himself does not seem to have distinguished sharply between the olfactory bulb and the nerve leading to it, regarding both alike simply as parts of a mechanism for transferring vapor into the cavities of the brain, which is where he held the actual sensation of smell occurred.¹³²

Galen remarks that Theophrastus inquired why things that smell sweet often taste bitter.¹³³ Such discrepancies had already been remarked upon by Aristotle,¹³⁴ and the phenomenon is mentioned by Theophrastus more than once;¹³⁵ but his fullest discussion of the topic, to which reference appears to be made in the other passages, is in *Explanations of Plants* 6.16. This is initially concerned with one particular issue, the reason why wild fruit is more fragrant but cultivated fruit sweeter in taste; Theophrastus also observes that there is a similar contrast between unripe and ripe fruit, and extends the discussion to the bitterness of fragrant plants in general.¹³⁶ His explanation is that sweet taste is linked with dryness and earthiness of the juice, whereas strong fragrance requires the juice to be thin and volatile.¹³⁷ Fragrance is linked with the giving off of the watery element;¹³⁸ it is thus a result of concoction and heat,¹³⁹ which explains why fragrant plants are found in hot places.¹⁴⁰ On the other hand, too much heat¹⁴¹ and too much dryness¹⁴² reduce fragrance. Terms like *hot* and *dry* in any case have to be understood relatively in these contexts; if smell is produced by an alteration in the intervening medium, and fish can smell through water, it clearly cannot be the case that certain smells make the water dry in any absolute sense. Again, even if there is a link between fragrance and heat, Galen warns us that those who suppose that all that is fragrant is hot, and vice versa, are misunderstanding Aristotle and Theophrastus.¹⁴³ And, even if fragrance is linked with the giving off of the watery element, it cannot simply be identified with vapor so produced, if fragrance itself is the presence of the *dry* part of taste in the transparent, that is, in this case, in the air.¹⁴⁴ If the vapor given off is a mixture of dry and moist which blends with the surrounding air, perhaps

it is the dry part of the vapor that affects the air; or perhaps we should already speak of affection rather than mixture in the case of the vapor. But this takes us back to the question whether smell is an affection of the air or a material effluence. At any rate, all taste and smell depend on mixture; the four primary elements in themselves have no taste or smell,¹⁴⁵ and a fortiori we cannot analyze tastes or smells simply by identifying them with a single one of the primary opposites.

Theophrastus is twice cited by Plutarch for the connection between fragrance and heat, in contexts where Plutarch is commenting on the tradition that Alexander the Great's body was exceptionally fragrant due to his fiery nature.¹⁴⁶ Plutarch attributes this tradition about Alexander to Aristoxenus; Tzetzes conflated the references to Theophrastus and to Aristoxenus in Plutarch, so as to attribute the statement about Alexander itself to Theophrastus.¹⁴⁷

Galen says that if one studies what he himself and Theophrastus have to say about rose-perfume, one will realize that the mixture that produces it is not total mixture but rather a juxtaposition of small particles.¹⁴⁸ Theophrastus does mention the composition of rose-perfume several times in *De odoribus*,¹⁴⁹ but does not seem to say anything there that might bear out Galen's claim. Galen goes on to refer to the power of penetration of rose-perfume, which Theophrastus does explain in a way that might imply its being made up of small particles;¹⁵⁰ but Galen seems to treat this as a distinct point from that about the composition of the rose-perfume from its ingredients for which he actually cites Theophrastus. He does not say that Theophrastus explicitly states that rose-perfume is constituted in this way, only that this is the natural inference to draw from what he says.

The pleasantness or unpleasantness of an odor depends on whether it is proportionate to our sense of smell.¹⁵¹ Theophrastus criticizes Plato for discussing flavors purely in terms of their effect on us rather than of their nature in themselves,¹⁵² but he himself holds that one needs to discuss both the nature of the thing sensed and its effect on the sense-organ.¹⁵³ As he points out, different creatures react differently to the same sensory stimuli;¹⁵⁴ and he criticizes Democritus for failing to account for the fact.¹⁵⁵

Theophrastus' treatment of taste and smell builds on Aristotelian foundations. Tastes and smells are accounted for in terms of the four primary opposites: hot, cold, wet, and dry—though not in any oversimplified fashion—and especially, where plants are concerned, in terms of the process of concoction. How far Theophrastus abandons or compromises an Aristotelian account of the transmission of smells is a question that seems difficult to resolve; that of the relation between the secondary citations and Theophrastus' own works is perhaps rather more tractable.

NOTES

1. Earlier versions of this paper were read at a meeting of the Open University London Region Classics Staff Seminar and at the 1983 Liverpool Conference of Project Theophrastus. I am grateful to all who were present on each occasion for their most helpful comments; to Dr. David Sedley, the commentator on the paper at the Project Theophrastus conference; and to Professor G.E.R. Lloyd for advice on some passages from Galen. I have also been very greatly helped by being able to use the work of my colleagues in Project Theophrastus, especially Mrs. Pamela Huby's work on psychology. The responsibility for remaining imperfections is, of course, my own.
2. *De simplicium medicamentorum temperamentis et facultatibus* (henceforth *SM*) vol.11 p.379, vol.12 p.377 Kühn.
3. Galen, *SM* 4-23 p.700.4-702.16. See below, note 137.
4. The accuracy of Pliny the Elder in some passages where he draws on Theophrastus is discussed by P. Steinmetz, *Die Physik des Theophrastos von Eresos* (Bad Homburg 1964) 107-10, and by G.E.R. Lloyd, *Science, Folklore and Ideology* (Cambridge 1983) 141-47. I have discussed a group of citations in Athenaeus in "Theophrastus on Fungi" (with D.W. Minter of the Commonwealth Mycological Institute, Kew) *Journal of Hellenic Studies* 103 (1983) 154-6.
5. Leipzig 1862; repr. Paris 1866.
6. See below, note 68.
7. Diogenes Laertius 5.42-6. Cf. O. Regenbogen, "Theophrastos," in Pauly-Wissowa, *Real-Encyclopädie* suppl. 7 (1950) 1363ff.
8. Diogenes Laertius 5.45 and 5.46 respectively. *Peri chulôn* is also mentioned by Michael of Ephesus, in *Parv. Nat., Commentaria in Aristotelem Graeca (CIAG)* vol.22.1 p.149.7; the form of his reference is neutral as between a work in one and a work in several books. There is a reference forward to *Peri chulôn* at Theophrastus, *Enquiry into Plants* 1.12.1.
9. *SM* 1.28 pp.449.15-450.3.
10. Steinmetz, p.253f. Cf., e.g., *De causis plantarum* (henceforth *CP*) 6.1, and *De odoribus* (*On Smells*) 5-7.
11. Diogenes Laertius 5.43.
12. Cf. H. Usener, *Analecta Theophrastea* (Bonn 1858) p.13 (= his *Kleine Schriften*, vol.1 p.61).
13. Diogenes Laertius 5.45.
14. 6.3-13 are concerned with flavors, and 6.14-20 with odors, though the distinction is not a hard and fast one—6.5 and 6.9 are concerned with smell, and much of the discussion in 6.14-20 is concerned with smell in relation to taste. Cf. B. Einarson and G.K. Link, *Theophrastus De Causis Plantarum* I (Loeb 1976) xiii; Regenbogen, 1448.
15. *CP* 6.3.3, 6.20.4; cf. also 6.11.2.
16. See note 14 above. There is an apparent reference back in *De odoribus* 5 to *CP* 6.9.4, 6.14.5, and 6.16.7 (see below, note 135).
17. Diogenes Laertius, 5.46 (read *phutikôn*; cf. Regenbogen, 1435).
18. Diogenes does list a work *On Animals* in seven books, preceded by seven individual titles relating to animals (5.43-4); but Regenbogen, 1429ff. argues against Usener that the former is not simply to be identified with the latter. Again, Diogenes lists both the *Physics* in eight books (5.46) and *On the Heaven*

- (5.50), which was in fact *Physics* book 3 (Simplicius, in *Phys.*, *CIAG* vol.10 p.1236.1); but this is in different sections of Diogenes' list (on which see Regenbogen, note 7 above). One might wonder whether "one *thesis* concerning the soul" (Diogenes, 5.46) was identical with part of *On the Soul*, which was itself also part of the *Physics* (below, note 25); but Regenbogen, 1523 regards this *thesis* rather as a rhetorical work. Regrettably, only the first volume of the Loeb *De causis plantarum* has so far been published, so we only have Einarson's introduction and not his detailed discussion of book 6. Through the kindness of Professor G.P. Goold, the Editor of the Loeb Classical Library, I was offered the opportunity of consulting the typescript of the remaining volumes; but I have not in fact done so, feeling that if I had consulted the unpublished commentary on book 6, I would have wished to draw upon it so frequently that to do so would be an embarrassment.
19. *CP* 6.7.6; Regenbogen, 1452.
 20. *De odoribus* 7.
 21. Hort's Loeb translation (*Theophrastus, Enquiry into Plants* II, 1916) is therefore misleading, in that it definitely implies a reference forward: "Next we must endeavour to speak of those odours, *and also* those tastes, which are artificially and deliberately produced" (my emphasis).
 22. *CP* 6.1.1; cf. 6.3.1.
 23. *De odoribus* 1.
 24. *CP* 6.20.4; above, note 15.
 25. Themistius, in *De an.*, *CIAG* vol.5.3. p.108.11; cf. Steinmetz, pp.11–13.
 26. Steinmetz, p.338 suggests that it might rather be a part of *On the Soul*; but against this cf. H.B. Gottschalk at *Gnomon* 39 (1967) 20. See also Regenbogen, 1399–1401.
 27. Aristotle, *De sensu* 4 441b19–21.
 28. *CP* 6.1.1; cf. G.M. Stratton, *Theophrastus and the Greek Physiological Psychology before Aristotle* (London/New York, 1917; in fact an edition of the *De sensibus*), p.43. Cf. also below, section IV, after note 123.
 29. Cf. *CP* 6.3.4, 6.4.3, 6.6.1–2, 6.7.3, 6.9.4, 6.12.5, 6.13.2.
 30. *CP* 6.3.1.
 31. *CP* 6.11.11.
 32. Aristotle, *De anima* 2.10 422a8ff.; Priscianus Lydus, *Metaphrasis in Theophrastum, Supplementum Aristotelicum* vol.1.2 p.15.27 Bywater. Stratton, p.45 and n.15.
 33. Galen, *Adversus Lycum* 4.6–7, *Corpus Medicorum Graecorum* (CMG) vol.5.10.3 p.15.11–20.
 34. A different list is given at *Enquiry into Plants* 1.12: wine-like, olive-oil-like, honey-like, pungent, and bitter, but this relates more directly to plant flavors than do the more general *CP* passages (where the salty flavor is not even a plant flavor, properly speaking; cf. *CP* 6.10.1); Stratton, p.44 and n.11.
 35. Cf. E. Zeller, *Die Philosophie der Griechen* vol.2.2³ (Leipzig 1879) p.811 n.1 ad fin., citing Brandis; Zeller himself compares Theophrastus' acceptance of the proverbial view that nocturnal north winds only blow for three nights (*De ventis* 49).
 36. Aristotle, *De sensu* 4 442a19–25; cf. Beare's note in the Oxford translation (1908). The beginning of the paragraph might seem to imply that it is the rich taste, rather than the salty, that Aristotle prefers to eliminate; but subsequently he couples eliminating the rich taste with eliminating yellow as a color, and since he, like Theophrastus, seems to prefer to eliminate grey rather than yellow,

- the implication is that it is the salty taste that is to be eliminated rather than the rich one.
37. Aristotle, *De sensu* 3 440b23, 6 445b21, 446a19.
 38. *CP* 6.4.1.
 39. Theophrastus, *De odoribus* 1. Cf. Plato, *Timaues* 66d; Galen, *SM* 4.22 p.699.5–11.
 40. Aristotle, *De anima* 2.9 421a31–2; cf. 421a8–10.
 41. Plato, *Timaues* 65b–66c.
 42. Aristotle, *De anima* 2.10 422b10–14.
 43. Galen, *SM* 1.38 p.451.11–15.
 44. Oribasius, *Coll. med.* 14.5 (*CMG* vol.6.1.2 p.185.25–6). Both Galen and Oribasius also attribute to Plato another taste, the soda-like (*nitrôdes* in Galen, *litrôdes* in Oribasius), which he does not seem to distinguish clearly from the salty.
 45. Galen, *De alim. fac.* 1.1.39 (*CMG* vol.5.4.2 p.513.25–6).
 46. Plato, *Timaues* 65cd; Galen, *SM* 1.38 p.450.16–451.4. See also below, note 77.
 47. See the exhaustive discussion of the phrase by M. Dubuisson, *hoi amphi tina—hoi peri tina: l'évolution des sens et des emplois* (Ph.D. diss. Liège 1977).
 48. Galen, *SM* 1.39 p.453.4–8.
 49. Theophrastus, *CP* 6.6.5 and 6.11.1 respectively.
 50. *CP* 6.2.1 and *De odoribus* 60; also *apostûphein*, *CP* 2.8.1 and *De odoribus* 36.
 51. Galen, *SM* 4.4 p.653.5–13.
 52. Cf. Simplicius, in *Cat.*, *CIAG* vol.8 p.235.8–10. Theophrastus seems to have studied argument forms based on difference in degree (Alexander, in *An. Pr.*, *CIAG* vol.2.1 p.390.7–8). Cf. also *CP* 6.3.5, 6.12.3, 6.13.2; Aristotle, *Nicomachean Ethics* 8.1 1155b13–14.
 53. Aristotle, *De sensu* 3 439b18–440b23. Cf. also *Metaph.* I 2 1053b28–34, where colors seem to be derived not from the opposites white and black but simply from white, though exactly how is unclear; for this passage I am indebted to discussion at the London ancient philosophy seminar founded by the late Professor G.E.L. Owen. On nonquantitative analysis in Theophrastus cf. also Barker's paper in this volume (chapter 14).
 54. Aristotle, *De anima* 2.10 422b11–12, *De sensu* 4 442a12–19, 442b19, 6 445b25–6.
 55. Cf. *CP* 6.6.1, 6.6.10, 6.9.4; *De odoribus* 64. Most of these references are to the views of others or to views generally held. Cf. Stratton, 44 and n.7.
 56. Aristotle, *De sensu* 4 442a26; Theophrastus, *CP* 6.4.2, cf. 6.16.8 and Galen, *SM* 4.9 p.650.5–651.1. Cf. also Aristotle, *De sensu* 4 442a2–12.
 57. *CP* 6.4.2–6; cf. 6.6.8–9.
 58. *CP* 6.4.7; cf. (of odors) 6.5.
 59. *CP* 6.5.6; he hesitates, but cf. 6.6.3 (below, section III).
 60. Galen, *SM* 4.18 p.679.9–16.
 61. Plato, *Timaues* 65e.
 62. Below, notes 139–40.
 63. Below, note 135.
 64. *CP* 6.14.6; 6.16.8. See, however, Dr. Sedley's comment in the immediately following paper.
 65. Aristotle, *De sensu* 4 442a18–19, *De anima* 2.10 422b10ff. I am grateful to Professor G.E.R. Lloyd for pointing this out.
 66. Priscian, *Metaphrasis* p.18.7–12 Bywater; Aristotle, *De anima* 2.11 432b12–20.
 67. Priscian, *Metaphrasis* pp.3.34–4.2 Bywater. Stratton, p.45 and n.16.

68. Galen, *De methodo medendi* 1 (vol.10 pp.9.12–10.3 Kühn). Cf. also *Adversus Julianum* 4.4 (CMG vol.5.10.3 p.43.13–19) and 4.14 (ibid. pp.46.19–47.4), 5.10 (ibid. p.50.13–21); *De caus. proc.* 15.192–3 (CMG suppl. vol.2 p.52.3–18); *De methodo medendi* 2.5 (vol.10 p.110.17–111.14 Kühn); *De nat. fac.* 2.4 (p.165.12–19 Helmreich) and 2.8 (p.181.11–23 Helmreich); *De plac. Hippocr. et Plat.* 5.3.17–18 (CMG vol.5.4.1.1 p.309.25–34) and 8.5.24 (CMG vol.5.4.1.2 p.510.1–5); *De temperamentis* 1.3 (p.9.20–9 Helmreich).
69. Paracelsus, *Von Ursprung und herkommen der Franzosen* 3.14 (vol.1.7 p.258.1 Sudhoff), and *Paragranum* 1 (vol. 1.8 p.72.30–5 Sudhoff). I am grateful to the late Dr. Walter Pagel for the latter reference.
70. Cf. the passages referred to in notes 43, 51, 56, 71, 85, 97, and 133. Cf. also *SM* 1.39 p.455.9–16 with *CP* 6.1.2–6.4.1.
71. See below, note 86.
72. Theophrastus says (more plausibly?) that the olive ends up as being *sour* (*CP* 6.6.3, below).
73. See below, note 75.
74. Plato, *Timaues* 65cd; only the last two clauses are verbatim quotation. Cf. Theophrastus, *CP* 6.1.4 and *De sensibus* 84. Theophrastus in *CP* 6.1.4 attributes to Plato the view that the harsh taste is more cleansing (*rhuptikon*) than the sour, which might seem to contradict Plato's statement that it is less rough; but perhaps there is no contradiction, for Theophrastus has in *CP* 6.1.3 described the rough taste as having a "mild and gentle sourness."
75. *CP* 6.7.1; cf. Galen, *SM* 4.7 p.637.11–13 (below, note 76) and 4.11 p.653.10–15 (below, note 83).
76. *CP* 6.6.3, 6.6.6.
77. *CP* 6.6.6 (below); for differences between parts of the same plant cf. 6.12.3–4, 6.13.1.
78. The passage was admittedly well known; Theophrastus himself quotes it at *De sensibus* 84 and alludes to it at *CP* 6.1.4 (cf. note 74).
79. See above, note 56; with *homostoichos* (coordinate) here compare *sustoichos* in *CP* 6.4.2, cited there.
80. *Perikarpion*; the structure surrounding the actual seed, and hence including the flesh of the fruit.
81. In the *Enquiry into Plants* 1.12.2 Theophrastus states that the flavor of fruit varies with the type of tree, but becomes less like that of the parent tree as ripening proceeds. I am grateful to Professor J.G. Lennox for this reference.
82. *CP* 6.11.1; cf. notes 49, 137.
83. Galen, *SM* 4.11 pp.653.10–654.18.
84. [Aristotle], *Problems* 22.8 (no explicit reference to the sun).
85. *CP* 6.7.1; above, notes 71, 76.
86. Cf. *CP* 6.7.4, 6.14.10.
87. *SM* 4.3, pp.628.15–630.12.
88. *CP* 6.7.5–6.
89. Aristotle, *Meteor.* 2.3 359b4–7; Theophrastus, *CP* 6.3.2.
90. Aristotle, *De sensu* 4 441b1–5.
91. Alexander, *In De sensu*, *CIAG* vol.3.1 p.71.24–72.4. Cf. Theophrastus, *CP* 6.3.1, who, like Aristotle, attributes this view to "the ancients."
92. Diogenes Laertius 5.42; probable citations at Pliny, *Natural History* 31.83, 31.106. Cf. Steinmetz, pp. 312–22.
93. Galen, *SM* 4.14 pp.664.4–665.4.

94. CP 6.15.3.
95. Plutarch, *Quaest. Conviv.* 5.3 (*Moralia* 676ab).
96. Galen, SM 2.17 pp.503.13–504.8.
97. CP 6.7.4.
98. CP 6.16.6.
99. Cf. Aristotle, *De part. an.* 2.3 650a22; Theophrastus, CP 6.11.5 and 6.17.9; [Aristotle], *Problems* 13.4 (qualified); [Aristotle], *De plantis* 1.2 817b19.
100. Cf. CP 6.6.8, 6.12.5; also 6.10.4, 6.11.9 (both qualified by “as it were,” and the former relating to saltiness, which is not a natural plant flavor (6.10.1).
101. Aristotle, *Meteorologica* 2.3 358a19–26.
102. Olympiodorus, in *Meteor.*, CIAG vol.12.2 pp.156.26–157.8.
103. Above, note 27. Olympiodorus says that for Theophrastus the dry, smoky exhalation arises from the sea-bed; but this only appears at the end of his account, and his previous formulation is compatible with the earth affecting the water directly for Theophrastus, and not by means of an exhalation. He may therefore have been careless at the end of his account, misled by the familiarity of the idea of the dry exhalation in Aristotle. Aristotle states that the dry exhalation cannot occur in water at all (*De sensu* 5 443a30–1). Cf. Steinmetz, pp.296–98, who suggests that Theophrastus was led to adopt his new explanation as a result of his reinterpretation of the dry exhalation.
104. Aristotle, *Meteor.* 2.3 358a4–5.
105. [Aristotle], *Problems* 23.35.
106. Cf. Aristotle, *De sensu* 5 442b27–9, *De anima* 2.9 421a16, 421a31–2; Theophrastus, CP 6.1.1, 6.9.1–2, 6.14.2; *De odoribus* 1, 9, 67. Stratton, p.25 and nn.; see above, notes 39f., and below note 154.
107. CP 6.1.1; cf. Priscian, *Metaphrasis* p.14.10–12 Bywater (below, note 122); Aristotle, *De sensu* 5 442b27–443a2, *De anima* 2.9 422a6. Stratton, p.37 and n.8; B.S. Eastwood, “Galen on the Elements of Olfactory Sensation,” *Rh. Mus.* 124 (1981) 286–89. On the exact formulation, however, see below, note 123.
108. Aristotle, *De sensu* 5 443a2–8, 444b7–13; *De anima* 2.9 421b26ff.
109. Theophrastus, *De sensibus* 21–22. Stratton, pp.39–40.
110. Theophrastus, *De sensibus* 20; Stratton, p.21 and n.14, pp.36–38. But see David Sedley’s remarks on this passage in the immediately following paper (chapter 9).
111. Cf. Aristotle, *De anima* 2.7 419a25.
112. Aristotle, *De sensu* 6 446b13–15. For the instantaneous propagation of light in Aristotle cf. *De anima* 2.7 418b20; Theophrastus cited changes from darkness to light, when a light is brought into a room and the whole room is allegedly illuminated simultaneously, as a counterexample to the Aristotelian claim that all change is in time (Themistius, in *Phys.*, CIAG vol.5.2 pp.197.4–8; Simplicius, in *Phys.*, CIAG vol.10 p.998.13–16).
113. CP 6.9.3, 6.14.11, 6.16.8 (below, note 151). Stratton, p.39 and n.19.
114. CP 6.17.1.
115. A similar argument is used in the context of an effluence theory of perception by Hieronymus of Rhodes, fr. 53 Wehrli.
116. *De odoribus* 3.
117. Ibid. 45; and cf. CP 6.9.3. At *De sensibus* 90, criticizing Plato, he concedes that “it is generally agreed” (*schodon homologeitai*) that smell involves an emanation (*aporrhoē*) and respiration; Stratton (p.36) treats this as not being a statement of Theophrastus’ own opinion, but this seems difficult in the context. Moreover,

- Theophrastus' Greek might more naturally be taken as meaning "smell is an emanation" rather than "there is an emanation" as Stratton translates.
118. Stratton, p.40.
 119. Priscian, *Metaphrasis* p.16.16–19 Bywater. (Even if this, in isolation, could be taken as Priscian's supplying an *Aristotelian* answer to Theophrastus' statement of a problem, the comparison with *De sensibus* 21–22 makes this less likely.)
 120. I am grateful to Dr. Sedley for emphasizing to me the need to distinguish these issues.
 121. See Sedley's paper in this volume.
 122. Priscian, *Metaphrasis* p.14.10–12 Bywater.
 123. J.B. Gottschalk, reviewing Steinmetz, *Die Physik des Theophrastos*, at *Gnomon* 39 (1967) 25f.
 124. Cf. Priscian, *Metaphrasis* pp.19.25–31 Bywater, and (against Diogenes of Apollonia) Theophrastus, *De sensibus* 46. Stratton, p.25 and n.37.
 125. Aristotle, *De sensu* 5 442b27–443a2; *De anima* 2.17 419a32–5.
 126. Philoponus, in *De anima*, *CIAG* vol.15 p.354.12–16; cf. also (without Theophrastus being named) Alexander, in *De sensu*, *CIAG* vol.3.1 p.88.18–89.5; Themistius, in *De anima*, *CIAG* vol.5.3 pp.62.29–32; Simplicius, in *De anima*, *CIAG* vol.11 p.139.2–5; and Priscian, *Metaphrasis* p.16.1 Bywater (I am grateful to Mrs. Huby for the last reference).
 127. Suda, s.v. *osphrantikon* (vol.3 p.571.1–6 Adler) and, less fully, s.v. *diosmos* (vol.2 p.114.12–14 Adler).
 128. Philoponus, in *De anima*, *CIAG* vol.15 p.392.31–3; cf. p.395.15–16 and p.398.19. In the second of these passages MS D has *ithmoeidōn*, MS A *masto-*, and Trincavelli emended to *isthmo-*; in the third Hayduck prints *isthmo-* and simply comments that D has *ithmo-*; in the first he prints *isthmo-* with no comment. The Suda's *homoeidē* could be a corruption of *ēthmoeidē* (easy in uncials), and A's *mastoeidē* a reflection of that; however, Hayduck at *CIAG* vol.15, p.vii indicates that A is the source for the Suda, rather than vice versa.
 129. Galen, *De usu partium* 8.7 (vol.1 pp.472.21–473.2 Helmreich). I have not been able to locate any use of the term in relation to this particular bone in Hippocrates; for the word, cf. Hippocrates, *Vet. med.* 22 (vol.1, p.626.13 Littré) and *De oss.* 4 (vol.9, p.170.18 Littré).
 130. Above, note 128.
 131. Suda s.v. *rhīs* (vol.4 p.296.10–11 Adler). The presence of this confusion was suggested to me by Mrs. Huby.
 132. Cf. Galen, *De usu partium* 8.6 (vol.1 pp.463.24–464.2 Helmreich), and *On Anatomical Procedures: The Later Books* (trans. W.L.H. Duckworth, Cambridge 1962) 9.7 (p.5) and 14.2 (p.186f.: perhaps a later addition). R.E. Siegel, *Galen on Sense Perception* (Basel 1970) 142ff., especially p.146f.; Eastwood, p.269f., p.285f.
 133. Galen, *SM* 4.22, pp.697.15–698.4.
 134. Aristotle, *De anima* 2.9 421a26ff.
 135. Cf. *CP* 6.9.4, 6.14.5; *De odoribus* 5.
 136. *CP* 6.16.2–3, 6.16.7.
 137. *CP* 6.14.5, 6.16.2–3, 6. Cf. 6.11.1, 6.17.3–4; Stratton, p.42 and n.38. The concoction producing odor and that producing flavor are distinct (*CP* 6.17.4, cf. 6.9.4). Galen's own explanation of the discrepancy is that, of the three constituents of, e.g., a rose, taste can detect the earthy which is sour and the airy which is hot and bitter as well as the watery, but it is the watery alone

- which, being heated and given off as vapor, produces the fragrant smell (*SM* 4.23, pp.701.1–702.16). There is a *general* similarity here to Theophrastus' explanation.
138. *CP* 6.14.9–10, 6.16.6. (See below, note 144). Consequently fragrance is associated with dryness (*CP* 6.14.2, 6.17.6, and see below, note 140), but only up to a point (below, note 142).
 139. *CP* 6.14.1; above, note 137.
 140. *CP* 6.14.8, 6.18.3; cf. [Aristotle], *Problems* 12.3 906b12ff., 13.4 908a13ff.
 141. *CP* 6.17.2; cf. 6.18.3. Stratton, p.39 and n.17.
 142. *CP* 6.17.2; cf. also *CP* 6.20.1–4 and [Aristotle], *Problems* 12.3 906b20ff. Cf. note 31 above.
 143. Galen, *SM* 2.3, p.476.1–11; cf. 4.22 p.698.13–17 (below, note 151).
 144. At *CP* 6.16.6 (above, note 138) Theophrastus only says that the giving off of moisture *occurs at the same time* as the fragrance; though at 6.16.8 he appears to identify exhalation and fragrance (below, note 151). At *De sensibus* 90, while apparently conceding to Plato that smell involves emanation (above, note 117), he says that it is wrong to identify it with "smoke and mist."
 145. Aristotle, *De sensu* 5 443a9–12; Theophrastus, *CP* 6.3.1.
 146. Plutarch, *Life of Alexander* 4.5 666c, *Quaest. conviv.* 1.6 623f.
 147. Tzetzes, scholion on Hesiod, *Words and Days* 412 (*Poetae Minores Graeci* vol.4 p.220.11–13 Gaisford).
 148. Galen, *SM* 3.16, pp.593.11–594.2.
 149. *De odoribus* 25, 33, 35.
 150. *De odoribus* 45; above, note 117.
 151. *CP* 6.16.8; Theophrastus seems in fact to speak of the *exhalation* from the object of smell as being proportionate to the sense of smell (above, note 113). Galen argues that, while all things are hot, whether the smell is pleasant or not depends on how the vapors given off are suited to the cavities in the brain, which is where *he* believes smelling to occur (above, note 132); *SM* 4.22, p.698.15–17, cf. Eastwood, pp.284–86.
 152. Theophrastus, *De sensibus* 89–90. Stratton, p.20 and n.10.
 153. *CP* 6.1.2, 6.2.1; *De sensibus* 72. Cf. also *CP* 6.12.6. Stratton, pp.20–1 and nn.
 154. *CP* 6.5 (cf. *De odoribus* 4); cf. 6.2.1, 6.12.11. The human sense of smell is particularly weak; *CP* 6.5.3, 6.17.10, *De odoribus* 4; Aristotle, *De sensu* 4 440b30ff.; idem, *De anima* 2.9 421a9. Stratton, p.40 and n.25.
 155. *CP* 6.17.11 (which is corrupt but appears to be making this point); cf. *De sensibus* 69.

9

Three Notes on Theophrastus' Treatment of Tastes and Smells

David N. Sedley

The handling of tastes and smells in the preceding chapter by Sharples is thorough and authoritative. I want only to offer three supplementary notes. The first two concern Theophrastus' commitment to Aristotelian orthodoxy. The other deals with the evidential status of Galen's secondary reports of Theophrastus' views.

First, I am intrigued by Theophrastus' claim that the number seven is "most canonical and natural" (*De causis plantarum* [CP] 6.4.2). As Sharples suggests,¹ Aristotle himself shows a marked predilection for finding a sevenfold division of colors and tastes in *De sensu* 4. Moreover, here, as often in the *De sensu*, this reads as an intentional elaboration of the *De anima* account, in which eight flavors were listed but in passing and with a hint that the list is only provisional (2.10 422b14: "these seem more or less to be the varieties of flavor"). On the other hand, Aristotle never *states* that the number seven is special. On the contrary, in *Metaphysics* 14.6 1093a13–19, where he derides the Pythagorean thesis that seven has special explanatory properties, he insists that the fact that there are seven vowels, Pleiades, Against Thebes, etc. is purely accidental. Syrianus in his commentary on the *Metaphysics* rightly points to *De sensu* 4 as conflicting with the spirit of this criticism. Are we to say, then, that there are two distinct tendencies in Aristotle's thought on canonical numbers, and that Theophrastus has developed rather more candidly than Aristotle might have wished the more Pythagorean of the two tendencies?

Second, I want to focus on an apparent inconsistency, namely, that in *De sensibus* 20 Theophrastus seems on a first reading to deny that smell is an effluence, while in CP and *De odoribus* he tends to treat it as if it were.² Aristotle certainly denies the effluence theory (*De sensu* 5 443b1–2), and regards smell as transmitted by the action of its source on the medium (*De anima* 3.12). Yet the effluence theory of smell is, as it happens, the correct

one. It would be pleasing, then, to think that Theophrastus was clear in his own mind on this issue and consciously departed from Aristotle in the cause of truth. Does he indeed deny the effluence theory of smell? I think not. *De sensibus* 20 reads as follows:

What Empedocles says about effluences, although inadequate, is to some extent intelligible as regards the other senses, but is hard to understand as regards touch and taste. For how are we to discriminate rough and smooth by effluence, or how do they fit into our passages? For fire seems to be the only element to give off effluences, and none of the others. Again, if wasting away is due to effluence, which Empedocles uses as the most general evidence for his theory, and if it is also a fact that smells are produced by effluence, the smelliest things ought to be the quickest to be destroyed. Yet in fact almost the opposite is true: of plants and other things it is the smelliest that last longest.

The crucial sentence ("Again, if . . .") is a conditional with two protases, and with the counterfactual apodosis that the smelliest things ought to be quickest to be destroyed. The two protases are "if wasting away is due to effluence . . . and if it is also a fact that smells are produced by effluence." Is Theophrastus asking us to reject the first protasis, the second, or both? It makes best overall sense to suppose that Theophrastus regards only the first as false and is assuming the truth of the second—that smells are produced by effluence. Empedocles claimed that there were effluences from everything, and supported this by the thesis that effluence is the universal cause of things' gradually wasting away. Theophrastus himself, in this passage, is arguing against Empedocles' general theory of effluence. What he opposes to it is not a blanket denial of effluence but a restriction of effluence to one element—fire alone of the elements produces effluences. But this is entirely consistent with the view that smells are effluences, because Theophrastus himself explicitly associates smell with heat.³ It therefore seems the most economical reading of this passage that Theophrastus is accepting, as he does in other works, that smells are effluences, and showing how this conflicts with the broader Empedoclean thesis that wasting away is due to effluence and hence that there are effluences of everything. In that way, consistency with Theophrastus' other works is restored. He really does hold that smells are effluences. And he is consciously correcting Aristotle.⁴

I now move on to my third note, concerning the evidential status of Galen's secondary reports. In his *De simplicium medicamentorum temperamentis et facultatibus* Galen attributes to Aristotle and Theophrastus the view that pungent taste is the hottest (4.18), yet this matches nothing in the extant works of either⁵ (although the view already had the backing of Democritus and Plato, and may even have been uncontroversial). Perhaps it did occur

in the lost works of one or both. But another possibility bothers me, at least in the case of Theophrastus. At *CP* 6.1.3 he does connect pungency with heat but not on his own behalf. Here he is expounding the difference between two kinds of explanation of taste. One may analyze a taste either in terms of the physical constitution of the object possessing it, as Democritus did, or in terms of the effect on the appropriate sense-organ,

as if one were to explain the sweet taste as the one which separates the inherent moisture in the tongue, or as a lubricating or light or smooth taste; sour taste as the one which dries or mildly stiffens the tongue; pungent taste as the one which stiffens, or stings, or separates out the heat in the inherent moisture into the upper region, or simply as *the taste which burns or heats*, . . .

If Galen has this passage in mind, he may be misleadingly attributing to Theophrastus himself what Theophrastus has offered as a purely hypothetical definition of pungent in the course of illustrating a methodological issue.

NOTES

1. See Sharples, chapter 8, section II, in this volume.
2. See Sharples, section IV.
3. Not that smell effluences will consist purely of fire, which in itself is odorless (*De sensibus* 22). Theophrastus will have to hold that fiery effluences carry the smell.
4. The coining of *diosmon* (see Sharples, section IV) may well have arisen in the course of commenting on Aristotle's theory. There is no need to suppose that Theophrastus used it in his own theory of smell.
5. See Sharples, section II.

in the history of medicine. The modern era of medicine is the era of the laboratory. The modern era of medicine is the era of the laboratory. The modern era of medicine is the era of the laboratory.

It is the history of the laboratory. It is the history of the laboratory. It is the history of the laboratory. It is the history of the laboratory. It is the history of the laboratory.

The history of the laboratory. The history of the laboratory. The history of the laboratory. The history of the laboratory. The history of the laboratory. The history of the laboratory.

The history of the laboratory. The history of the laboratory. The history of the laboratory. The history of the laboratory. The history of the laboratory. The history of the laboratory.

The history of the laboratory. The history of the laboratory. The history of the laboratory. The history of the laboratory. The history of the laboratory. The history of the laboratory.

10

Theophrastus on Emotion

William W. Fortenbaugh

While Aristotle's treatment of emotion has in recent years received considerable attention, Theophrastus' work on the same subject has been mostly ignored. The reason for this neglect is that the relevant material has not been readily accessible, but with the publication of my *Quellen zur Ethik Theophrasts*¹ that obstacle has been largely removed. Texts whose primary focus is emotional response have been brought together under the heading "Affekte" (L1-L11), and other relevant texts are included elsewhere in the volume (e.g., L12, L30, L88, L117, and L118). My purpose here is to call attention to this material and to advance our understanding of Peripatetic work on emotion. We shall see that Theophrastus' treatment of emotion is Aristotelian (section I) and yet of especial interest, for it involves analyzing closely related emotions in terms of the more and less (section II). We shall look closely at the emotion of faultfinding (sections III-V), observe parallels with Theophrastus' classification of plants (sections II-III, VI) and take note of the fact that different kinds of emotion are marked off not only by differences in degree but also by the presence and absence of characteristic features (sections III, V-VI). Finally, we shall see that absences have an effect at the highest level: there is no set of general features which are possessed by each emotion and which together constitute an adequate definition of emotion—or more cautiously, of that varied group of *pathē* which play such an important role in Peripatetic ethics, rhetoric, and poetics (section VI).²

I

Theophrastus follows Aristotle in holding that anger, fear, and other similar emotions are complex phenomena involving belief, desire, bodily movement, and sensation (pain or pleasure). With regard to Aristotle the point has already been argued in the literature,³ so I limit myself to a single

example, namely, anger. This emotion is discussed in several places including *On Soul* 1.1 403a3–b19 and *Rhetoric* 2.2 1378a30–1380a5. In the former passage Aristotle emphasizes that anger has both a corporeal and a psychic component. It involves bodily movement (boiling of blood and warmth around the heart) and also desire for revenge, so that any definition which mentions one component and not the other is incomplete. In the latter passage Aristotle is concerned to meet the needs of the orator and therefore focuses on psychic factors. Anger is said to be a desire for revenge accompanied by pain and caused by apparent insult to oneself or one's own. Aristotle speaks of apparent insult, because it is not necessary for an insult to have actually occurred. To become angry one need only believe that it has. In Aristotelian terms this belief is the efficient cause of anger, and it is properly mentioned together with desire for revenge and bodily movement in a complete definition of anger. The relationship of pain to anger is more problematic. Aristotle certainly believes that there is a close connection, and in the *Rhetoric* he makes pain a defining mark of anger. Whether he always thought of pain as an essential ingredient in anger and other similar emotions is a question which will occupy our attention in section III.

The evidence for Theophrastus is contained in several different texts but, taken together, these texts are adequate to support the claim that Theophrastus followed Aristotle and adopted a complex view of emotional response. Staying with the example of anger we may begin with an excerpt preserved by Stobaeus (*Anthology* 3.19.12 = L88):

Theophrastus: Nor indeed should men of practical wisdom do anything at all in anger, for rage is most unreasonable and will never do anything with forethought, but drunken with contentiousness, as may happen, it is subject to impulses. Consequently you ought not to take immediate revenge for misdeeds either from slaves or from anyone else, in order that you may always do what (seems) best to reason, not what is dear to rage, and that you may extract a penalty from your enemies, as a result of which you are going to harm them without causing yourself pain. For taking revenge on someone while injuring oneself is no less to pay a penalty than to extract one. Consequently one ought to seek to defend oneself over a period of time rather than quickly to chasten the enemy in a way not beneficial to oneself.

Theophrastus' primary concern here is to discourage angry men from hasty action. In doing this he makes quite clear that anger involves both a desire for revenge and a belief that injustice has occurred. It is the desire for revenge that makes a man "drunken with contentiousness" and "subject to impulses," and it is the belief that wrong has been done that causes a man to want "revenge for misdeeds." This belief can be erroneous, but it can

also be quite correct and justify anger. The man of practical wisdom avoids uncontrolled, impetuous action, but he does on occasion become angry. A remark attributed to Theophrastus by Seneca makes the point in a straightforward manner: "Good men are angered on account of wrongs done to their own" close friends and relatives (*On Anger* 1.12.3 = L10).

The Stobaeus passage quoted above urges us to seek a revenge which causes harm to our enemies without causing pain to ourselves. What is not said is that anger itself is painful, so that impetuous individuals are likely to end up with a double pain: one directly attributable to the emotion and the other resulting from imprudent action. I know of no Theophrastean text that speaks explicitly of a double pain, but that is of little matter, for Theophrastus certainly recognized the fact that anger is a painful emotion. A selection from the *Meditations* of Marcus Aurelius (2.10 = L4) provides clear evidence:

In comparing mistakes, as one generally compares such things, Theophrastus states philosophically that miscues due to appetite are more serious than those due to rage. For when a man becomes enraged, then in conjunction with a certain pain and internal contraction, he manifestly abandons reason. But when a man makes a mistake on account of appetite, then being inferior to pleasure he is in a way manifestly more undisciplined and more effeminate in his mistakes. Therefore, he (Theophrastus) stated correctly and worthily of philosophy that the mistake accompanied by pleasure invites greater reproach than that accompanied by pain. On the whole the one (who is in a rage) seems more like a person who has suffered an initial wrong and been compelled by pain to become enraged. The other has on his own initiative rushed to do wrong, swept into some action by appetite.

Marcus is not quoting Theophrastus directly. He is reporting a comparison made by Theophrastus, namely, the greater seriousness of wrongs due to appetite in comparison with those attributable to extreme anger or rage. Moreover, Marcus' own Stoicism intrudes itself at the very outset: He feels obliged to say "as one generally compares such things," because as a Stoic he thinks that all wrongs are equally bad. But if the passage must be read with some caution, there is no reason to think that Marcus is misrepresenting Theophrastus, when he speaks of rage being accompanied by "a certain pain and internal contraction." Marcus' word for contraction (*systolē*) is a *terminus technicus* among the Stoics (*SVF* 3.386,391,394), but Theophrastus may well have anticipated Stoic usage. Questions of vocabulary aside, Theophrastus certainly thought that emotions involve bodily movements or changes (Simplicius, *CIAG* vol. 10 p. 964.31-965.1 = L2) and that these changes manifest themselves as painful or pleasant sensations: painful in the case of

an emotion like anger and pleasant in the case of say, finding something funny and responding with laughter.

II

We have been looking at texts which strongly suggest that Theophrastus followed Aristotle in holding a complex view of emotional response. I now want to focus on a different text, for which no Aristotelian equivalent survives. It is found in Simplicius' commentary on Aristotle's *Categories* (CIAG vol. 8 p. 235.3–13) and runs as follows:

Suppose some people object to the classification which does not make the one many, as (they say) is necessary, but brings together many into one and makes one class of habit and disposition on the grounds that the former is intensified and the latter slackened, while maintaining the same specific character. And suppose they should say that it is possible that nothing prevents even some things⁴ which differ in kind from differing in respect to the more and less. And suppose they should adduce as examples fault-finding and anger and rage, which Theophrastus in his work *On Emotions* says differ in respect to the more and less and are not identical in kind. Similarly, too, friendship and goodwill are intensified and relaxed and each is different in kind; savagery and bestiality in relation to anger, and appetite and lust are distinguished in the same way, and in general the more shameful of the emotions, when intensified, change into another kind.

This passage is not a statement of Simplicius' own view. It is rather an objection which Simplicius raises in order that he may argue against it. For our purposes the important point is that Theophrastus is said to have analyzed faultfinding, anger, and rage (*mempsis*, *orgē*, and *thymos*) in terms of the more and less (*to mallon kai hēttōn*). Unfortunately, it is not entirely clear whether the immediately following examples—friendship and goodwill, savagery, bestiality and anger, appetite and lust, generally the more shameful passions—are drawn from Theophrastus. Nor is it immediately clear whether Simplicius is saying that Theophrastus thought of difference in degree as merely compatible with difference in kind or actually determinant of difference in kind. On the whole I am inclined to believe that Theophrastus used the more and less to distinguish between species, and for this I have three reasons. The first is the general drift of the passage. Simplicius signals no break between the mention of Theophrastus and his following remarks, including the generalization concerning shameful emotions. This generalization does treat difference in degree as determinant of difference in kind (“the more shameful of the emotions, when intensified, change into another kind”) and so suggests that Theophrastus did the same.

The second reason is that Stobaeus attributes to Theophrastus a definition of lust (*erōs*) which fits well with our Simplicius passage. The definition runs as follows: "Lust is an excess of an unreasoning appetite, whose coming is swift and parting slow" (Stobaeus, *Anthology* 4.20.64, vol. 4 p. 468.4–7 Hense = L117). The definition is not entirely perfect, for the cause is not specified (see section VI), but it does make clear that (moderate) appetite becomes lust when the appetite intensifies. And since this is the sort of change or contrast that Simplicius has in mind when he writes "appetite and lust are distinguished in the same way" (i.e., by the more and less), I am inclined to think that Simplicius is drawing on Theophrastus both here and throughout the list of examples.

The third reason is that such an analysis would not be without well-known precedents. Aristotle had made important use of the more and less in various contexts including zoology, while Theophrastus regarded it as basic to the classification of plants.⁵ Especially clear is the introduction to the *Historia plantarum* (1.1.6), where Theophrastus offers programmatic remarks concerning differentiation by reference to parts.

Differences in parts, to take a general view, are of three kinds: either (1) some parts are possessed and others not,⁶ as for example leaves and fruit, or (2) the parts are dissimilar and unequal, or (3) they are arranged differently. Of these, dissimilarity is determined by shape, color, density, rarity, roughness, smoothness and the other qualities, and further the several differences in flavor. Inequality is determined by excess and defect in number or size, and to speak in general terms, all of those too (i.e., dissimilarities in shape, color etc.) fall under excess and defect. For the more and less is excess and defect.

The idea that (1) the possession or lack of a part makes a difference is important and will occupy our attention in the following section of this paper. For the present our focus is on (2) and on the more and less, which Theophrastus mentions, in order to explain the fact that dissimilarity can be included under excess and defect. This is familiar Aristotelian doctrine (e.g., *Cat.* 8 10b26–11a19, *HA* 1.1 486a26–b17), so that Theophrastus does not labor the point. Instead he takes it as common ground that qualities can be possessed unequally, and then in the detailed discussion that follows he makes frequent reference to differences in degree. Since the matter has received some attention in the scholarly literature⁷ and is well known, I limit myself to a single example—the date-palm (*phoenix*). Theophrastus states explicitly that there are several kinds of date palm (2.6.6), and he makes special mention of those which grow in Babylon, Cyprus, Syria, Egypt, Crete, and Ethiopia (2.6.6–11). The doum-palm, which grows abundantly in Ethiopia, is said to be distinguished by various characteristics,

including leafstalks that are smooth and not long, a broad leaf, and fruit which is rounder, larger, and more palatable, yet less sweet (2.6.10). In the case of Cyprus Theophrastus is careful to distinguish between three kinds of date-palm. One is said to have fruit which is very pleasant and sweet when unripe. Another is characterized as shorter and more fruitful, while still a third is marked off by broader leaves and much larger fruit (2.6.7–8). There is more to this analysis, and in the next section I shall return to it. For now the important point is that Theophrastus uses degree of difference to distinguish between different kinds of date-palm. This is typical of his approach to botany, and if our Simplicius passage is a good guide, it is also important to his analysis of closely related emotions like faultfinding, anger, and rage.

This may seem like an advance over (or departure from) Aristotle, for in the *Rhetoric* little use is made of the more and less. The account of anger in 2.2 is typical. Aristotle spells out the condition of men prone to anger (1379a10–29), the persons toward whom one feels anger, and the grounds or reasons why one is angry (1379a30–b37). He does recognize that anger admits of degree (e.g., 1379a38, 3, 11, 14, 27),⁸ and he does treat calmness (*praiinsis*) as the opposite of anger (1380a6–b34), but he never makes use of difference in degree to mark off anger from other closely related emotions.⁹

A complete survey here of all the emotions discussed by Aristotle is neither possible nor necessary, but a word concerning friendship or friendly feeling (*philia*) seems in order, for our Simplicius passage mentions this emotion together with goodwill (*eunoia*) immediately after faultfinding, anger, and rage. In the introduction to *Rhetoric* 2 Aristotle actually pairs friendship with goodwill and states that the two are to be discussed within the account of emotions (1378a18–19). However, the discussion of friendship in 2.4 proceeds without any mention of goodwill. Aristotle devotes himself almost exclusively to describing the person who is the object of friendship (i.e., the friend), and while he does acknowledge the existence of different kinds of friendship—camaraderie, closeness, kinship, and the like (1381b34)—the acknowledgment is a mere footnote, lacking any reference to difference in degree. Here we must be careful. Failure to develop a footnote does not mean that Aristotle was unable to analyze comradeship, closeness, and kinship in terms of the more and less, and certain remarks in the *Ethics* suggest that he could have done so. Friendship between child and parent is characterized as more pleasant and useful than friendship between persons who are unrelated (*EN* 8.12 1162a7–8); friendship between brothers is said to contain elements found in friendship between comrades, and more so when the brothers are good and in general when they are alike, inasmuch as they are closer and have loved one another since birth (1162a9–11). That Aristotle ever—perhaps in some lost work—explicitly introduced the more and less

in order to distinguish between comradery, closeness, and kinship is, of course, unproven and unprovable, but that difference in degree played an important role within his ethical system is certain. He characterizes vice in terms of excess and defect (EN 2.6 1106b33–4) and in the case of two closely related virtues such as generosity and magnificence, he sees a difference in scale (EN 4.2 1122a22).¹⁰ Especially interesting is Aristotle's analysis of bestiality (*thēriotēs*) as an undesirable disposition that goes beyond vice and differs from it in kind (EN 7.1/EE 6.1 1145a22–33, 7.5/6.5 1148b34–1149a20), for a close relationship to our Simplicius passage is obvious. Both texts characterize bestiality as shameful or opprobrious (Simpl. 235.12–13; EN/EE 1145a33) and both take note of difference in degree (Simpl. 235.9 and 13; EN/EE 1145a24, 1149a5; cf. MM 2.5 1200b9). Whether or not Aristotle himself made the shift from bestiality as a disposition to bestiality as an emotion and in so doing anticipated Theophrastus by marking off bestiality (or savagery and bestiality) from anger cannot be decided with certainty, but I would not be surprised if he did. We should not forget that Diogenes Laertius lists two Aristotelian works on emotion, *Peri pathōn orgēs* (5.23) and *Pathē* (5.24). The former title is suspicious, but Rose has suggested referring the plural *pathōn* to various species of anger.¹¹ My own inclination is to follow those scholars who emend the title to *Peri pathōn ē peri orgēs* (*On Emotions or On Anger*)—a double title in which the second member indicates the emotion treated first by Aristotle and perhaps most fully.¹² But whether we keep the title as transmitted or opt for the emendation just mentioned,¹³ we can easily imagine Aristotle focusing on difference in degree in order to mark off anger not only from bestiality but also from other closely related emotions like faultfinding and rage.

III

In the preceding section I have focused generally on the more and less and its apparent use in the analysis of emotion. What I have not done is tackle the particular case of faultfinding, anger, and rage. This may seem like an unimportant omission, for in section I I have pinned down several features that are typically involved in emotional response and can vary in degree. Anger involves bodily movement (boiling of blood and warmth around the heart), a desire for revenge, the belief that insult has occurred, and painful sensations. Rage, it would seem, involves these same features to a greater degree and faultfinding to a lesser degree. There are several problems here, but let me begin with what I take to be the most obvious difficulty. It is the connection between faultfinding and pain. For while painful feelings are prominent in anger and rage and therefore encourage analysis in terms of the more and less (cf. EE 3.3 1231b13–15), such feelings

do not seem central to faultfinding. The faultfinder is primarily a complainer (he does something) and not a sufferer. Theophrastus' sketch of faultfinding (or more accurately "faulting one's lot": *mempsimoiria*) illustrates the point. The initial definition mentions an action, namely, criticism of one's portion (*Char.* 17.1), and the subsequent description of the faultfinder sets forth a string of humorous complaints (17.2–9). There is no explicit mention of painful sensation, nor even any hint that pain is involved in faultfinding.

Theophrastus' sketch is funny and not intended as a carefully formulated answer to the question whether faultfinding involves painful sensations. Were the work *On Emotions* extant we would look there for Theophrastus' considered answer, but since that work is lost and there is no other Theophrastean text that explicitly addresses the question, I want to suggest three different possibilities. The first is that Theophrastus did not deny a connection between faultfinding and pain. He recognized that pain is not prominent but nevertheless held that faultfinding is always painful. He could then cite degrees of pain when distinguishing between faultfinding, anger, and rage: the faultfinder experiences very little pain, the angry individual experiences more, and the enraged person still more. This is the simplest possibility, and it may well be Theophrastus' answer.

The second possibility is like the first in that it recognizes a connection between faultfinding and pain, but is also different in that it makes room for exceptions. Theophrastus will have held both that the unpleasant sensations felt by the faultfinder are quite weak and that on occasion they may even be absent. By recognizing the presence of weak sensations Theophrastus would be able to offer an analysis in terms of the more and less, and by allowing for absences he could also take account of the fact that sometimes faultfinders do not seem to feel anything. Here a passage in the *Eudemian Ethics* is relevant. It runs: "I call emotions such things as rage, fright, shame, appetite and generally things which are in themselves accompanied for the most part by sensory¹⁴ pleasure and pain" (2.2 1220b12–14). On one interpretation of this passage (I shall soon consider a second) Aristotle is saying that while sensations follow upon emotion per se, the connection is nonetheless defeasible. There are occasions when an individual is emotional and yet feels nothing that can be called a painful (or pleasant) sensation.¹⁵ We know that Theophrastus paid special attention to the *EE*,¹⁶ and given the preceding interpretation of *EE* 1220b12–14, we can easily imagine him arguing that faultfinding is in itself accompanied by painful sensations, but only for the most part. Further, we can imagine Theophrastus following the *EE* and generalizing the point so that it applies not just to faultfinding but to many different emotions, including anger and rage. For while painful sensations are prominent in anger and rage, their prominence does not rule

out exceptions, e.g., confronted with a sudden, unexpected insult a man may respond immediately and violently without feeling anything.

Here it might be objected that while there are cases in which a man responds without experiencing painful or pleasant sensations, such cases do not count as emotional responses. Emotions are by definition painful or pleasant, so that anytime a man responds emotionally he necessarily feels pleasure or pain.¹⁷ The qualifier “for the most part” (*EE* 1220b13) is not to be pressed but rather taken as a “throw-in” whose only role is to affect a tentative manner.¹⁸ This objection has an initial plausibility, for Aristotle’s definitions of emotion in *Rhetoric* 2.1 1378a19–22 and *EN* 2.5 1105b21–3 mention pleasure and pain without the addition of a qualifying phrase.¹⁹ On reflection, however, there need be no contradiction involved in holding both that pleasure and pain belong to emotion per se and that occasionally emotion occurs without feelings of pleasure and pain. There are two reasons for denying contradiction. One is that what is true of a kind need not be true of each particular specimen. To take an Aristotelian example, man is by definition a biped (*Top.* 5.3 132a1–4; cf. 5.4 133a3–5), but not every man has two feet (*Top.* 5.5 134a8–11, b5–7).²⁰ There is, of course, always an explanation (e.g., an accident or surgical procedure), but the explanation does not lead one to deny that the creature under consideration is a man. Its nature is that of a man and its behavior or lifestyle is (as far as possible) human. Not surprisingly, Theophrastus addresses this issue at the beginning of his *History of Plants*. He first tells us that a part that belongs to the nature of a plant seems to be permanent either absolutely or once it has come into existence. Then he adds the important qualifier “unless it is lost because of disease or old age or mutilation” (1.1.2). These causes can be further explained, e.g., age and decay occur when a plants’ natural moisture and heat fall short (1.2.4), but for our purposes the important point is that Theophrastus may have offered a similar analysis of emotions like faultfinding, anger, and rage: their nature is to be painful, but exceptions, which admit explanation, do occur. The kind of explanation that Theophrastus would have offered is, I think, clear enough. Emotions involve bodily movements, and while these movements most often manifest themselves as painful (or pleasant) sensations, there are exceptions. Sometimes the movements are too weak to be noticed (e.g., when someone voices a complaint but his blood barely boils), or they are blocked by intense mental activity (e.g., when one’s entire attention is absorbed by a sudden situation), or they are obscured by some competing sense experience (e.g., when an outraged person suffers a serious wound²¹). In these cases there is bodily movement, but it does not result in painful sensation.

An alternative reason for denying contradiction is suggested by a remark in *De sensu* 3 440a10–12: “The sun in itself appears white, but through

mist or smoke (it appears) purple.” Here as at *EE* 1220b12–14 Aristotle recognizes a *per se* connection which occasionally fails. Moreover, the connection is not a matter of definition but rather one of cause and effect. This involves no oddity, for the phrase “in itself (themselves)” is used in more than one way. Sometimes it is used to mark an essential connection such as that between triangle and line—the former is defined in terms of the latter (*An. post.* 1.4 73a34–7), but it is also used to indicate causal connection and so to mark a contrast with accidental concomitance, e.g., being slaughtered is in itself followed by death, while the occurrence of lightning is merely incidental to taking a walk (*An. post.* 1.4 73b10–16). For our purposes the important point is that causal connection can be broken. Perhaps few creatures survive a cut throat (one needs the healing intervention of an Homeric god), but the sun’s failure to appear white is familiar enough. Similarly, the bodily movements or changes involved in emotional response normally cause painful or pleasant sensations, but there are exceptions. In the case of emotions like anger and rage exceptions may be quite rare, but I would not be surprised if Aristotle allowed for such cases when he wrote that emotions are in themselves accompanied for the most part (*hōs epi to polu* 1220b13) by sensory pleasure and pain.

It should be clearly stated that this interpretation does not harmonize with the view of emotion advanced in *Rhetoric* 2. For in this work sensations are treated as essential ingredients in emotional response. Not only does the initial characterization of emotion mention pain and pleasure (2.1 1378a20–1), but several of the specific emotions, e.g., anger, fear, and shame, are defined (partly) in terms of painful sensation (2.2 1378a30, 2.5 1382a21, 2.6 1383b12). Does this tell against the above interpretation, or does it mean that Aristotle changed his thinking about the connection between emotion and sensation? The question cannot be answered with certainty, but we should at least take notice of *On Soul* 1.1 403a24–b9, where Aristotle argues that a complete definition of anger mentions a goal, a cause, and some bodily motion. The absence of any reference to painful sensations may be without significance, but on the other hand it may be important. For perhaps Aristotle came to think that sensory pleasures and pains follow emotions in themselves not because sensations are essential to emotional response and therefore mentioned in the essential definition of emotion, but because emotions involve bodily movements which cause pleasant and painful sensations. Theophrastus certainly thought that emotions involve bodily movements (Simplicius, *CIAG* vol. 10 p. 964.31–965.1 = L2), and both he and Aristotle may have come to believe that while emotions like faultfinding, anger, and rage are normally painful, the pains are effects and only for the most part.

While I incline toward the preceding interpretation, there is still a third possibility: Faultfinding differs from anger and rage in that it is quite without pain and therefore like hate (*misos*), which in the *Rhetoric* is said to be without pain and therefore different from anger: "The one [anger] is accompanied by pain, the other [hate] is not accompanied by pain. For the man who is angry feels pain, but the man who hates does not" (2.4 1382a12–13). Here Aristotle is thinking in terms of necessary features which are invariably present (or absent) whenever a given emotion occurs. Anger is always painful, and this explains why we do not become angry at people who act in anger: No one who acts in anger slights others, for slights are painless, but anger is accompanied by pain (*Rhet.* 2.3 1380a34–b1; cf. *EN* 7.6 1149b20–3). In contrast, hate is always painless, and this enables Aristotle to explain why hate is more reasonable than anger. At least in his *Politics* he argues that hate makes greater use of calculation, "for anger is accompanied by pain, so that it is not easy to calculate, while hate is free from pain" (5.10 1312b32–4).

In this context I want to recall Aristotle's statement at *EE* 2.2 1220b12–14. For while I tend to believe that this passage is concerned with exceptions among the particular responses of individual men, it is possible that the passage concerns exceptional kinds of emotion.²² Aristotle would then be saying that while most kinds of emotion (e.g., anger and hate) are followed by painful (or pleasant) sensation, some kinds are not. If this interpretation is correct, then Theophrastus may well have argued that while anger and rage are painful, faultfinding is not; angry and enraged individuals always feel pain, while a faultfinder never does. What especially interests me about this third possibility is the way in which it invites comparison with Theophrastus' method in botanical studies. We may recall *HP* 1.1.6 (quoted above in section II), where we are told that parts may be possessed by one plant and not by another, differ in degree and be arranged differently. Our Simplicius passage refers to the more and less, and for this reason we have been focusing on difference in degree. But Theophrastus is clear that this is only one way in which closely related kinds differ from one another. And when different kinds of date-palm are distinguished in *HP* 2.6.6–11, the analysis is not restricted to the more and less. In fact, Theophrastus gives pride of place to the possession and absence of a part: "There are several kinds of date-palm. First, and as it were the greatest difference, one kind bears fruit and another does not" (2.6.6). Whether Theophrastus ever offered a similar analysis of faultfinding, anger, and rage cannot be decided with any certainty. But given the Aristotelian analysis of hate and his own interest in the possession and absence of attributes, we should take the possibility seriously.

If the above interpretation is the correct one, then faultfinding, anger, and rage do not form a genus in which the species differ only in degree. This may be obvious, but the point is worth underlining for two reasons. First, while Aristotle does take account of absences in *History of Animals* 1.1 486b11–14 and 1.6 491a16–17, his argument in *Parts of Animals* 1.4 644a12–b15 proceeds as if species of the same genus differ only in terms of the more and less.²³ Second, and more important, as long as one ignores absences and thinks only of differences in degree—i.e., as long as one conceives of a genus as a finite set of general characteristics, all possessed in varying degree by each species of the genus—then one can in principle decide whether any particular closely related kind is a species of the genus in question. But as soon as one admits absences, one has difficulty drawing the line against certain kinds which share some features and not others. Do they share enough features or the right ones? How many features are required and which ones?²⁴ In our Simplicius passage faultfinding is grouped together with anger and rage, but do these three emotions belong to the same genus? If faultfinding lacks painful sensations, are there enough common features to justify positing a single genus? And how do faultfinding, anger, and rage relate to savagery and bestiality? According to our Simplicius passage anger, savagery, and bestiality differ in respect to the more and less. But are they species of the same genus? Our Simplicius passage offers no answer, and while this is hardly surprising in such a brief report, we should at least notice that nowhere in our passage is there mention of a genus. This may be commendable caution, for it allows one to recognize that the more and less is important for distinguishing between closely related kinds, while leaving open which kinds are properly assigned to a single genus and which are not.

IV

At the beginning of section III, I suggested that analyzing faultfinding, anger, and rage in terms of the more and less involves several problems. Having discussed one of these problems—the connection between pain and faultfinding—I now want to look at a different problem: the cause of faultfinding and its relationship to the causes of anger and rage. Is the cause of faultfinding like the causes of anger and rage, in being an apparent insult or injustice done to oneself or to one's own by some other person? And is it always trivial in comparison with the causes of anger and rage? Here Theophrastus' sketch of the faultfinder (*Char.* 17) is of immediate interest, for it lists a variety of typical complaints, some of which are directed toward an individual who is thought to have done something wrong, e.g., when a friend sends food to his house the faultfinder complains that he has not

been invited to dinner (17.2), and after winning in court by a unanimous decision, he faults his speech writer for omitting many arguments (17.8). The first case is easily seen as a response to apparent insult, and the second, while less clear, can also be construed as a response to some imagined wrong. In both cases the offenses are comparatively minor and so invite analysis in terms of the more and less: faultfinders, angry persons, and enraged individuals all take offense at some wrong done to them, but the offenses which occasion faultfinding are trivial in comparison with those which arouse anger and rage.

The preceding is not altogether wrong, but it does need significant qualification, for while faultfinding (or better, *mempsis*) is often and perhaps most often a response to unjust treatment by some other person(s),²⁵ it may also be a complaint concerning circumstances and bad luck. This is clear in the *Characters*, e.g., when the faultfinder comes upon a purse in the street, he remarks that he has never found a treasure (17.5), and when he receives the news that a son has been born, he speaks of losing half his property (17.6). In neither case is the faultfinder criticizing someone who has done him an injustice. He is rather complaining about his luck. Here it might be objected that these examples are atypical and intended to be funny—the humor depending on the fact that the complaints are quite absurd. But even if the *Characters* is primarily a collection of humorous sketches, it does not follow that Theophrastus is making a (deliberate) conceptual mistake when he depicts the faultfinder as one who complains about other things than personal insult. This is not to overlook the fact that some people attribute all kinds of bad luck to the gods. They may even imagine malevolent demons whom they fault for what they take to be unjust treatment.²⁶ But such individuals are only a portion of those who complain about unfavorable events or circumstances. We may compare Herodotus 1.77, where Croesus is said to have been dissatisfied (*memphtheis*) with the size of his army and so to have returned to Sardis. Faultfinding is always a matter of dissatisfaction, but it may or may not be in response to some insult or other kind of unjust action.²⁷

A further worry is whether the cause of faultfinding is always comparatively trivial in comparison with the cause of anger and rage. This is, of course, a matter of how one sees the situation and not what is in fact the case. People find fault when they think themselves treated unfairly and they may find fault, instead of becoming angry or enraged, when they mistakenly perceive some quite outrageous deed as a trivial offense. But can a man clearly see that an outrage has occurred and yet react by merely voicing a complaint? Theophrastus' sketch of the faultfinder does not encourage a positive answer. It is restricted to comparatively minor offenses and so offers no reason for recognizing exceptional cases. Still, there are two considerations

which do encourage me to think that Theophrastus would have recognized exceptions. The first is philological: If Croesus can be said to complain (*memphetai*) about the oracle that was given him at Delphi (Herodotus 1.91), and if the Athenians can be said to send envoys to fault (*mempso-menous*) the Spartans for allowing the Persians to invade Attica (9.6), ordinary language does not restrict faultfinding to the trivial, for in both cases the complaint concerns the fate of an entire city. The second consideration is physiological: Anger and rage require a certain bodily condition, and when this is not present, even quite a strong and clear (cf. Arist., *De an.* 1.1 403a19) offense may fail to arouse anger. In such a case the situation is seen and appreciated, but there is no intense pain or strong desire for revenge. The man either does nothing or responds to the situation by stating a complaint or finding fault with what has occurred.²⁸

V

Another problem concerning faultfinding that deserves at least brief notice is whether faultfinding is like anger and rage in being, among other things, a desire for revenge. In the case of anger Aristotle makes clear that this desire is never an idle wish. He defines anger as a desire for revenge (*Rhet.* 1378a30), and tells us that no one becomes angry when there is no prospect of revenge (1370b13, 1378b3–4). That Aristotle and Theophrastus, too, adopted a similar view of rage seems to me probable, but no surviving text makes the point explicitly. In regard to faultfinding we are better off, for we have the evidence of Theophrastus' *Characters*. Eight typical complaints are sketched, and in several a desire to cause pain is easily imagined. When the faultfinder criticizes his speech writer for omitting arguments (17.8) and when he complains that he was not invited to dinner (17.2), he seems to be uttering a rebuke. And when the faultfinder wonders aloud whether his mistress really loves him (17.3), his remark is intended to be heard and, we may suppose, to hurt the woman who hears it. Some complaints, however, seem to have little or no connection with causing someone else pain. For example, complaining about the weather is normally idle and not directed toward some other person, though the Theophrastean faultfinder may be foolish enough to think his complaint painful to Zeus (17.4). But when the faultfinder comes upon a purse and complains that he has never found a treasure (17.5), his remark is not directed against anyone; it is simply an expression of personal dissatisfaction.

The above is not meant to suggest that there are occasions when the faultfinder does nothing at all. He always does at least one thing—he voices his complaint (or puts it in writing). Still, this action need not be motivated by a desire to cause pain, and when such a desire is in fact present, voicing

complaints may be counterproductive. This is why angry men occasionally appear to do nothing, although they are silently plotting revenge. For as Theophrastus observes: the man who betrays his intentions does not know how to inflict harm (Burlaeus, *De vita et moribus philosophorum* 68, and codices Parisini 2772, 4718, 4887 = L106). Theophrastus, then, could have marked off faultfinding from anger on two related grounds: first, while the faultfinder always states a complaint, the angry man does not always do so; and second, faultfinding does not presuppose a desire to inflict harm in the way that anger does.

The second of these differences—the absence of a motivating desire—seems to me especially important, for it might be thought that desiring some object is an essential ingredient in emotional response. In the case of practical emotions like anger and fear this may be true, but in the case of other emotions it is not.²⁹ Faultfinding gives us a pause, for in certain respects it is similar to anger, and faultfinders do on occasion intend to hurt other people. But when a man finds, say, a joke or verbal play funny and responds with laughter, his response has no obvious tie to desire. That Theophrastus recognized this seems quite likely, for he spent considerable time on the laughable. He wrote monographs *On The Ludicrous* (D.L. 5.46) and *On Comedy* (D.L. 5.47), and a report by Athenaeus documents his interest in word play (*The Sophists at Dinner* 8.40 348A). Further, Plutarch tells us that Theophrastus himself could raise a laugh. At least he caused no offense when he said to a snub-nosed friend of Cassander, “I am amazed at your eyes, for they do not sing, though your nose gives them the pitch” (*Table Talk* 2.1.9 633B). The play here is on the verb *endidonai*, which is used ambiguously: the nose “gives in,” since it is snub; it also “gives the pitch,” in order that the eyes may sing. Such wit is a staple of comedy, and both on and off the stage it evokes laughter. Cassander’s friend is said to have taken no offense, and we can imagine him smiling, if not laughing. But that he and any bystanders wanted more of the same is neither stated nor implied.

One caveat is in order. Theophrastus did not think that finding something funny is a single emotion. We can be certain that he recognized different causes of laughter and was prepared to draw distinctions on this basis. Unfortunately neither of Theophrastus’ monographs on humor nor Book 2 of Aristotle’s *Poetics* has survived. But in the *Rhetoric* Aristotle does recognize three sources of humor: men, words, and deeds (1.11 1372a1), and the *Tractatus Coislinianus*—whether its source be Aristotle, Theophrastus, or some third Peripatetic³⁰—does make clear that early Peripatetics drew a distinction between laughter caused by diction and laughter caused by actions, and that within each of these major categories they recognized various subdivisions. We need not concern ourselves with details of these

divisions. The important point is that Theophrastus studied laughter in detail and almost certainly recognized that finding something funny—in many of its forms, if not in all—is not a practical emotion like anger and fear.

VI

We have already seen that an emotion such as hate is not accompanied by painful sensation (section III), and that an emotion like finding something funny lacks an immediate tie to desire (section V). We should now take note of the fact that some emotions—or better, *pathē*—are not caused by a particular kind of belief in the way that, say, anger is caused by the thought of outrage. An obvious example is appetite (*epithymia*). Hunger, thirst, and sexual desire are typical appetites, and all three are caused by bodily conditions; they are common to men and animals and are not open to persuasion in the way that an emotion like anger is. Indeed, appetites are not normally called “emotions,” and in the rest of this paper I shall use the Greek term *pathos*. For both appetite and anger can be grouped together as *pathē* (Arist., *EN* 2.5 1106a 21–2, *EE* 2.2 1220b12–13), but only anger is necessarily tied to a particular belief.

Hunger, thirst, and sexual desire have already been discussed in the scholarly literature.³¹ I would only add two points. The first has to do with a fourteenth-century monk named Baarlamus. His remarks concerning Theophrastus’ view of *pathos* are highly polemical and can only be used with considerable caution, but what he says about hunger and thirst does make clear that Theophrastus looked upon these *pathē* as natural and involuntary (*PG* vol. 151 col. 1362B, 1363B = L11). This is not to say that Theophrastus thought men quite powerless to control their eating and drinking, but rather that he thought appetite a bodily phenomenon whose occurrence does not presuppose certain kinds of belief. My second point is that hunger, thirst, and sexual desire are not the only *pathē* that lack an immediate tie to belief, and that Theophrastus’ work on delivery will have helped him see this. For, like Aristotle (*Rhet.* 3.1 1403b28, cf. 3.12 1413b9–10), Theophrastus connected rhetorical delivery with *pathos* (Athanasius, *RhGr* vol. 14 p. 177.3–8), and in his work *On Delivery* he almost certainly discussed individual kinds of *pathos*. This work is lost, but if we look at Cicero’s *On the Orator* 3.217–19, we see that such discussions might focus on, e.g., energy (*vis*) as well as anger (*iracundia*) and fear (*metus*). In other words, a manner not tied to belief could be brought under the label *motus animi* (= *pathos*) and treated together with other *pathē* whose occurrence presupposes certain beliefs.³²

We may recall here a point already touched upon in section III. It is that Theophrastus' interest in classifying plants made him sensitive not only to features that are shared by two or more kinds and differentiated by the more and less, but also to features that are present in some kinds and absent in others. The point was illustrated by reference to the date-palm, and its possible application to faultfinding was discussed. What we did not comment on earlier is that the absence of characteristic features has an effect at the highest level. In the case of plants, Theophrastus picks out root, stem, branch, and twig as the primary and greatest parts, and then adds that these are only "common to most" plants (*HP* 1.1.9), and that this makes the plant something difficult to describe in general terms (1.1.10). Of course, trees have all the primary parts and so can function as standard or paradigmatic cases. Theophrastus is aware of this (1.1.9–11), but he never confuses picking out central cases with offering a general description or definition applicable to all plants. That Theophrastus viewed *pathē* in a similar way seems most likely. He would have recognized several important features including desire, belief, sensation, and bodily movement, but would not have thought that each of these features belonged to every *pathos*. He might have recognized certain standard cases, e.g., anger and fright, which have all the features, but he would not have equated these central cases with a general definition. This is not to overlook the possibility that Theophrastus recognized one feature common to all *pathē*, namely, bodily movement (see sections I and III).³³ In the case of plants he certainly does recognize common elements, moisture and warmth (*HP* 1.2.3), but he does not think these elements all there is to being a plant. Similarly, he may have held that bodily movement is involved in all *pathē*, without claiming that bodily movement alone picks out and defines those *pathē* which occupy his attention in ethics, rhetoric, and poetics. Isolated from other features, bodily movement opens the door to all kinds of physical suffering and in addition is subject to the criticism Aristotle brings against those who define anger as a boiling of the blood and warmth around the heart. Such a definition gives only the matter, whereas a complete definition states both form and matter (*De an.* 1.1 403a29–b9).

In conclusion I would like to recall a point made elsewhere.³⁴ It is that the Greek commentator Aspasius is not confessing laziness when he tells us that he has been unable to find a definition of *pathos* among the older Peripatetics (*CIAG* vol. 19.1 p.44.20–1). His words are to be taken seriously, and they are to be explained by the fact that neither Aristotle nor Theophrastus offered what Aspasius hoped to find. It is, of course, true that in the *Rhetoric* Aristotle says that "*pathē* are all those (feelings) on account of which men differ in regard to judgments and which are followed by pain and pleasure" (2.1 1378a19–21), but this is not a general statement of what it is to be

a *pathos*. Rather it is an attempt to describe that group of *pathē* which are aroused and allayed by the speeches of orators (1.2 1356a14–16).³⁵ Similarly, in the *Ethics* Aristotle does not offer a general account of *pathos*. Instead he gives an illustrative list and then mentions pleasure and pain (EN 2.5 1105b21–3), because in ethics and politics pleasure and pain are of special importance (EN 2.3 1105a5–6, 10–12; cf. Plato, *Laws* 636D5–7). That Theophrastus offered similar statements not only in rhetoric and ethics but also in poetics and other fields of particular interest seems to me quite certain. But that either he or Aristotle offered a general definition is unlikely, for they had investigated many different kinds of *pathē*—hate, laughter, and appetite, as well as anger and fear—and as a result had come to realize that there is no one set of features that is shared by all *pathē* and constitutes a general definition of *pathos*.

NOTES

This paper in shorter form was originally part of my "Theophrastus on Delivery," now chapter 13 in this volume. In its longer, independent form it was presented to groups of philosophers and/or Classicists at Catholic University, Stanford University, the University of California at Berkeley, and the American Philosophical Association, Pacific Division meeting in Long Beach, California. I am indebted to many people for various kinds of help. My collaborators on Project Theophrastus: Pamela Huby, John Keaney, and Robert Sharples have been most generous with their knowledge. The same is true of Allan Gotthelf and Jim Lennox, who discussed with me problems concerning "the more and less." David Fairbrothers was kind enough to discuss with me modern approaches to the classification of plants. Stephen Leighton is to be thanked for sending me one of his articles in advance of publication, and Richard Janko for sending portions of his then forthcoming *Aristotle on Comedy* (London 1984). I also want to thank Julia Annas, Elizabeth Belfiore, and Dominic O'Meara for written communications. A different kind of assistance but no less appreciated has been generously provided by the National Endowment for the Humanities.

1. *Studien zur antiken Philosophie* Bd 12, 1984.

2. In sections I–V, I follow recent practice and use the English word *emotion* to translate *pathos*, but in section VI, when I turn from cases like anger and rage to rather different phenomena such as hunger (an appetite) and energy (a manner), I drop *emotion* in favor of the Greek word *pathos*. The alternative would be to use the Greek term throughout. This alternative has its attractions, but I have rejected it for two reasons. First, to use a Greek term at the very outset may unnecessarily alienate the Greekless reader whose interests are philosophical rather than philological. Second, and more important, the Greek term *pathos* no more matches the subject matter of this paper than does the English word *emotion*. For while *emotion* is too narrow, *pathos* is too wide, sometimes being used quite generally for *attribute*. See *Quellen* (above, note 1) 96 and the literature cited there. My concern in this paper is with a limited class of *pathē*: those central to Peripatetic ethics, rhetoric, and poetics, and for these *pathē* there does not seem to be a single, unambiguous label either in Greek or in English.

3. W. Fortenbaugh, *Aristotle on Emotion* (London 1975) 12–16.

4. Or "it is possible and that nothing prevents some things."
5. For "the more and less" in zoology see *PA* 1.4 644a6–18: "Groups which differ in respect to excess, i.e., by the more and less, are brought together in one group" and *HA* 1.1 486a21–23, b16–17: "Others are the same but differ in respect to excess and deficiency; this applies to those belonging to the same group. . . . One may consider the more and less (to be the same as) excess and deficiency." *HA* 1.1 486a25–487a1 relates closely to Theophrastus' remarks in *HP* 1.1.6–7. Of the literature on "the more and less" the following is a selection: D.M. Balme, "Genos and Eidos in Aristotle's Biology," *Classical Quarterly* 56 (1962) 87–89; idem, *Aristotle's De Partibus Animalium I and De Generatione Animalium I* (Oxford 1972) 103, 120; H.J. Krämer, "Grundbegriffe akademischer Dialektik in den biologischen Schriften von Aristoteles und Theophrast," *Rheinisches Museum* 111 (1968) 293–333; J.G. Lennox, "Aristotle on Genera, Species, and "the More and the Less,"" *Journal of the History of Biology* 13 (1980) 321–46.
6. My translation here is intended to convey the sense of the Greek text in the most economical way. It is not literal—the active verb *echein* is rendered with a passive form, and it obscures the question whether *ta men . . . ta de* refer to parts (*merē*) as I believe or to plants (*phyta*) which is certainly possible. Either way one must understand something.
7. See Krämer (above, note 5) 303–10.
8. In *Rhet.* 2.2 1379a30–b37 Aristotle is focusing on the persons with whom we become angry, and in accordance with this focus he notes that we become more angry with some people than with others: e.g., with friends in comparison with other people (1379b2–3, 13–14). A related but nevertheless different concern is the quickness with which we become angry. With friends we are (or should be) slow to feel anger, but once aroused we are often intensely angry. Aristotle treats certain conditions which make us liable to anger—e.g., painful states involving desire—in a separate section 1379a10–29.
9. The difference between anger and hate is not one of degree; see section III.
10. Difference in degree (small vs. large sums) is not the only difference between generosity and magnificence. While generosity concerns both giving and acquiring material goods (*EN* 4.1 1119b25), magnificence concerns only acts of spending (4.2 1122a21). It lacks a connection with the acquisition of material goods. (On absences see section III.) Furthermore, magnificence is closely tied to public occasions, and the magnificent man is one who spends money in the public interest (4.2 1123a5). See T. Engberg-Pedersen, *Aristotle's Theory of Moral Insight* (Oxford 1983) 73–74. I would, however, caution against seeing the interest of the city in every act of magnificence. When the magnificent man funds a wedding (1123a1), he is engaged in private affairs (1122b35), and depending on circumstances he may or may not consider what is good for the general public.
11. V. Rose, *Aristoteles pseudepigraphus* (Leipzig 1863) 111.
12. V. Rose, *Aristoteles Fragmenta* (Leipzig 1886) 4; R.D. Hicks, *Diogenes Laertius*, Loeb ed. (London 1950) 1.466; H. Long, *Diogenis Laertii Vitae philosophorum*, OCT (Oxford 1964) 1.206.
13. A third possibility is suggested by A. Kenny, *The Aristotelian Ethics* (Oxford 1978) 42, who changes *orgēs* to *hormēs*, translates the title as "On the Influence of the Passions," and identifies the work as *EE* 6 (*EN* 7).
14. I use *sensory* to translate *aisthētikē*, in order to emphasize the connection with sense (*aisthēsis*). Aristotle's point is not just that emotional people are for the

- most part aware of pleasure and pain. Rather he makes the stronger claim that this awareness is a matter of having pleasant and painful sensations. These sensations are caused by bodily movements and are experienced by virtue of the sense faculty; cf *Physics* 7.3 246b20–247a19.
15. M. Woods, *Aristotle's Eudemian Ethics* (Oxford 1982) 109–10; and W. Fortenbaugh, "Arius, Theophrastus and the Eudemian Ethics," *Rutgers University Studies in Classical Humanities* 1 (New Brunswick 1983) 211.
 16. Fortenbaugh (note 15 above) 203–23.
 17. The objection is made by S. Leighton, "Eudemian Ethics 1220b11–13," *Classical Quarterly* 34 (1984) 137.
 18. Aristotle does occasionally throw in a qualifier which should not be pressed, e.g., *Phys.* 226b27–8, where "or as little as possible" is not seriously meant, for continuous change cannot admit a break. For further discussion see my *Ar. on Emotion* (note 3 above) 47 n.2. Leighton (note 17 above) 135 thinks the qualifier is to be taken seriously, but he goes on to argue for exceptional kinds of emotion as against exceptional instances of a given kind. The idea will be developed later in this section.
 19. While I speak of "definitions of emotion" in order to strengthen the objection just stated, it should be noted that *Rhet.* 2.1 1378a19–22 is not intended as a general definition of emotion and that *EN* 2.5 1105b21–3 is not much more than an illustrative list. See section VI with note 35.
 20. See R. Sorabji, *Necessity, Cause and Blame* (London 1980) 190.
 21. In this case anger is accompanied by pain, but the connection is accidental and not per se. Of course, pain caused by a deep cut and generally any wound may help to stimulate anger, but it remains distinct from the pain that accompanies anger per se. Hence I disagree with Leighton (note 17 above) 136 n.8, and much prefer his remarks in an earlier piece "Aristotle and the Emotions," *Phronesis* 27 (1982) 156–57. For in this piece he carefully distinguishes between the pain of emotion and any chance pain that happens to occur at the same time. If I have any worry, it concerns Leighton's claim that different kinds of emotion are marked by pains (and pleasures) which differ not only in number and intensity but also in kind. This may be true for say anger and fear, but whether there is a (discernible) difference in kind between the pains of closely related emotions like faultfinding, anger, and rage is doubtful. Theophrastus might well say that the only difference is one of degree.
 22. This reading is advocated by Leighton (note 17 above) 135–38.
 23. Lennox (note 5 above) 336–39; D.M. Balme 1972 (note 5 above) 103, 120.
 24. While it is easiest to think of generic characteristics as those which are present to most members of a genus but may be absent in one or more species (e.g., parts whose presence is typical of the genus in question), it is also possible and sometimes best to think of absences as generic characteristics. Date-palms, for example, characteristically lack side shoots (*CP* 1.2.1; on *HP* 1.8.6 see Hort's note in the Loeb edition), so that the presence of side shoots is a reason for not grouping the dwarf-palm with other palms (*HP* 2.6.11). But is the presence of side shoots by itself a sufficient reason for rejecting the dwarf-palm (i.e., is the absence of side shoots a necessary condition for any plant being a date-palm), or is it this feature together with some other (e.g., the ability to survive after having its "heart" removed; *HP* 2.6.11, *CP* 1.2.3) which rules out the dwarf-palm?

25. For an Aristotelian example see *EN* 8.13 1162b5–6, 16–21. In friendships based on utility, accusations and complaints (*egklēmata* and *mempseis*) arise, when one party thinks he has not received his due from the other party.
26. People who do not believe in malevolent demons but on the contrary believe that the divinity is good and everywhere at work are likely to react strongly and negatively to faulting one's lot. On the Stoic polemic see, e.g., Epictetus, *Discourses* 1.6 and Marcus Aurelius, *Meditations* 7.14—these passages kindly called to my attention by Dominic O'Meara.
27. An individual case of faultfinding may resist simple classification. See, for example, Thucydides 1.84.1, where Archidamus warns the Spartans against being ashamed of the slowness and dilatoriness of which their allies complain (*memphontai*). The complaint to which Archidamus refers has two aspects. On the one hand, it is concerned with a general character trait, which Archidamus defends by citing the benefits it has brought (1.84.1–4, cf. 71.1–3); on the other hand, it concerns Sparta's present inaction, which the allies construe as unjust neglect (1.71.4–5).
28. A third consideration has been suggested to me by Elizabeth Belfiore. It is psychological and based on Aristotle's claim that it is impossible to be frightened of a person and at the same time to be angry at him (*Rhet.* 2.3 1380a33–4). Perhaps there are cases where fright prevents one from responding angrily to a serious offense, but it does not block a weaker (and safer) response like faultfinding.
29. Here I have benefited from the remarks of A. Gotthelf, "Comments on Professor Fortenbaugh's Paper with Special Attention to *Pathos*," *Rutgers Studies in Classical Humanities* 1 (New Brunswick 1983) 230. On practical emotions see my *Ar. on Emotion* (note 3 above) 79–83.
30. See now R. Janko, *Aristotle on Comedy* (London 1984).
31. E.g., Fortenbaugh (note 3 above) 33–35; and Leighton, "Aristotle and the Emotions" (note 21 above) 161–65.
32. For further discussion see my "Theophrastus on Delivery," chapter 13 in this volume.
33. Even a painless emotion like hate may be thought to involve bodily movements, albeit weak ones which pass unnoticed. See *De anima* 1.1 403a18–19.
34. W. Fortenbaugh, "A Note on Aspasia, In *EN* 44,20–1," *Proceedings of the World Congress on Aristotle* (Athens 1981) 175–78.
35. The description needs tightening up, for it lets in *pathē* like hunger and thirst. These *pathē* do affect judgment, but since they are caused by bodily changes and not by beliefs, they are not of primary concern to the orator.

The first thing I noticed when I stepped out of the car was the cold. It was a sharp contrast to the warm blanket I had been sitting under. I looked around and saw a few other people walking towards the same building. The air was thick with a mix of anticipation and nervousness. I took a deep breath and walked towards the entrance. The door was slightly ajar, and I could hear a faint murmur of voices from inside. I pushed the door open and stepped into a large, dimly lit room. The walls were covered in a pattern of light and shadow, and the floor was made of polished wood. I walked towards the back of the room, where I saw a group of people standing in a line. I joined the line and waited for a few minutes. Finally, a man in a dark suit and a white shirt stepped forward. He looked at me and smiled. "Welcome," he said. "I am Mr. Smith. Please follow me." He turned and walked towards a set of stairs. I followed him and went up to the second floor. The hallway was long and narrow, with a series of doors on either side. Mr. Smith stopped at one of the doors and knocked. A woman in a white lab coat opened the door and invited me inside. I followed her into a room that was filled with various pieces of equipment. She pointed to a large screen on the wall and said, "This is the main display. It shows the results of the experiment. Please look at it carefully." I looked at the screen and saw a series of numbers and graphs. I nodded and said, "I see. Thank you." She smiled and said, "You are welcome. Please let me know if you have any questions." I walked out of the room and followed Mr. Smith back to the first floor. He stopped at a desk and said, "Please sign this form." I signed the form and handed it to him. He smiled and said, "Thank you. You are now a member of our team. Please come back next week for your next appointment." I nodded and said, "Thank you. I will be back." I walked out of the building and saw a car waiting for me. I got into the car and drove home. I thought about the experience and felt a sense of accomplishment. I had been accepted into a team that was working on a project that was important to the world. I was excited and ready to take on the challenge.

11

Theophrastus on History and Politics

Anthony J. Podlecki

In the *Life of Alcibiades* 10.4, Plutarch says that among the philosophers Theophrastus was a man fond of listening and given to research (*andri philēkoōi kai historikōi*). This description is at first sight surprising, especially in light of a regrettable tendency among modern scholars to believe Jacoby's offhand dismissal, "Theophrastos, being little concerned about history. . . ." ¹ But it is a mistake to accept such blanket condemnations without examining more closely the evidence on which they are based, and a more careful examination of what remains not only of Theophrastus but of others in the "School of Aristotle" reveals that, as a whole, the group evinced a lively interest in history and politics. Several of them wrote works that, from their titles at least, appear to have been largely historical or political in content. Thus Heracleides of Pontus (even if he was not strictly a Peripatetic ²) wrote a *Peri archēs*, which was perhaps a dialogue on political theory, *Synthēkai* (*Treaties*), and a work *On Laws*, in which Protagoras' constitution for Thurii was discussed. ³ Phanias, Theophrastus' contemporary and also from Eresus, wrote works *On the Sicilian Tyrants* and *The Killing of Tyrants in Revenge*, and he is cited frequently and extensively by Plutarch and others for details in the *Lives* of Themistocles and Solon. ⁴ The *Bios Hellados* of Dicaearchus of Messene dealt largely with myth and prehistory, but it touched on the early history of Babylon and Egypt, on concubines in the train of Philip of Macedon and on the families of Agesilaus and Epaminondas. Dicaearchus also wrote what appears to have been a separate work on the *Constitution of Sparta*. ⁵ Demetrius of Phaleron, Theophrastus' pupil who seems to have been inspired by his teacher not only in some of his voluminous writings (he was said by Diogenes Laertius 5.80 to have been the most prolific of the Peripatetics) but also in his political activities, composed numerous treatises whose titles indicate some degree of historical content: *On Legislation at Athens*, 5 books; *On the Constitutions at Athens*, 2 books; *On Demagoguery*, 2 books; *On Politics*, 2 books; *On Laws*, one book;

Generalship, 2 books; *Ptolemy*; *Cleon*; *Aristeides*, etc.⁶ Ariston of Ceos, who succeeded to the headship of the School, c. 230 B.C., alluded to the amorous rivalry between Themistocles and Aristeides, and remarked on the advantages of making a sudden, unheralded entry into public life; this was a way of avoiding the envy usually attendant upon a gradual rise to prominence (fr. 25 Wehrli).

ARISTOTLE

This interest in history and politics was, of course, sparked off by Aristotle's instruction and example. The *Politics* and the *Constitution of the Athenians* survive;⁷ from the rest of the 157 *Constitutions*—on which Theophrastus may have collaborated, as we shall see below—only citations are left. In addition, there were numerous works of which we know only the titles. I list them following the order of Diogenes' book list and giving the number assigned by Moraux:⁸ 1. *On Justice*, 4 books; 4. *On the Statesman*, 2 books; 17. *Alexander, or On Behalf of Colonies*, 1 book; 18. *On Kingship*, 1 book (this may have been a collection of precepts to Alexander, as Moraux plausibly suggests on the basis of a similarly titled work by Epicurus in which he criticized philosophers generally and Aristotle in particular for consorting with sovereigns); 21. and 22. extracts from Plato's *Laws* and *Republic*, 3 and 2 books, respectively; 74. a work entitled *Politics*, 2 books, whose relationship to the extant *Politics* is unknown; 75. *A Course of Lectures on Politics like That of Theophrastus*, 8 books;⁹ 76. *On Just Actions*, 2 books;¹⁰ 129. a work variously entitled *Dikaiōmata* (*Claims*), *Dik. tōn poleōn*, *Dik. Hellēnidōn poleōn*, or *peri tōn topōn dikaiōmata*, which dealt with principles or methods of settling interstate disputes involving claims for compensation;¹¹ 139. *Nomos Systatikos* (*Law of Concord* [?]), 1 book, generally emended to *N. Syssitikos* (*Law of the Mess Table*), which would have no relevance to the present discussion; 140. *Laws*, 4 books, which perhaps related to (or was confused with) Theophrastus' *Nomoi*; 143. the 158 *Politeiai* already alluded to, described in the catalog as arranged *kat' eidē*, "democratic, oligarchic, aristocratic, tyrannical."

THE THEOPHRASTEAN CATALOG

In Diogenes' catalog of Theophrastus' writings (5.42–50), there are several parallels or equivalences with the political works of Aristotle, but Theophrastus also seems to have struck out in new directions of his own.¹² I list the relevant titles, following the order of Diogenes' list (an asterisk indicates that fuller discussion will be given below): *On Kingship*, one book (5.42), repeated later (5.49) but in connection with two books; *On the Education*

of a King, one book (5.42);¹³ *On [Ways of] Life* (*Peri biōn*), 3 books—from what can be inferred about a similarly titled work by Heracleides of Pontus, this was a philosophical rather than a biographical or historical work,¹⁴ although it has also been suggested that it was Plutarch's source in certain of his *Lives*;¹⁵ *Epitome of Plato's "Politeia"* (5.43): since a similar work, likewise in two books, is listed in the Aristotelian catalog, it is possible that the title is to be removed from Theophrastus' list; ¹⁶ **On Laws*, arranged alphabetically (*kata stoicheion*), 24 books (5.44); *Epitome of Laws*, 10 books (5.44): it is not clear whether and to what extent this differs from the preceding title; *Legislators*, 3 books (5.45): Henkel (20) notes Cicero's references to Theophrastus' defense of the historicity of Zaleucus, lawgiver of Locri;¹⁷ *Politics*, 6 books (5.45): it is possible, as Moraux notes,¹⁸ that this is the work of Theophrastus referred to in the Aristotelian catalog; Henkel (21) sees a reference to it in Cicero's *De legibus* 3. 13, where it is remarked that Theophrastus dealt with certain special political topics, such as *de magistratibus*; **Politika pros tous kairous*, sometimes cited simply as *Peri kairōn*, 4 books (5.45); *Politika êthē*, 4 books (5.45): while the title invites comparison with Cicero's statement that Aristotle had treated the *mores, instituta*, and *disciplinas* of "almost all states, both Greek and barbarian" (*De finibus* 5.11), the work itself may have been a supplement to the treatise *On Laws*;¹⁹ *On the Best Constitution*, cited later as *How Cities are Best Governed* (5.45; 5.49):²⁰ apparently referred to by Cicero (*De finibus* 5.11), who reports the subject matter of treatises written by both Aristotle and Theophrastus, *qui esset optimus rei publicae status*; *On Tyranny*, one book (5.45): a suggestion has been made, on rather flimsy grounds, that this title is nothing but the second book of the work *On Kingship*;²¹ *Peri historias*, one book (5.47), perhaps to be identified with a work cited elsewhere as *Historika hypomnēmata*:²² Regenbogen asks whether the *Hypomnēmata* comprised preparatory material for the politico-historical treatises, or were extracts from the finished works;²³ *To Cassander, on Kingship*, one book (5.47): with two separate titles on king and kingship already mentioned, we perhaps have a superfluity of works on this topic; in any case, the source of our only citation from this work, Athenaeus, questions the attribution to Theophrastus,²⁴ but if the work be accepted as Theophrastean, one might compare the title ascribed to Aristotle, *Alexander, or On behalf of Colonies* (Aristotle no. 17); *Megacles*, one book (5.47): nothing further is known about, nor are any citations preserved from, this intriguingly titled work; it was perhaps a "political" dialogue along the lines of those by Aeschines of Sphettus;²⁵ *On Laws*, one book (5.47): almost certainly a doublet for the work listed earlier; *On Illegalities* (*Paranomōn*), one book (5.47); *Problems, political, physical, amatory, ethical*, one book (5.47); *Statesman*, two books (5.50).²⁶

Theophrastus and Aristotle,

That Theophrastus acquired his interest in politics from his teacher (and both ultimately from Plato) is likely enough. Cicero's disputant in *De legibus* 3.14 remarks: "Theophrastus, under Aristotle's tutelage, dwelt extensively upon this topic" (my emphasis), and as we have already observed, certain titles are shared by the two writers: *On Kingship, Politics, Laws, An Epitome of Plato's "Republic,"* and (perhaps) *Statesman*. "Yet, even when Theophrastus handles topics previously touched on by Aristotle," Cicero (*De fin.* 1.6) can remark, "is there not a modicum of pleasure to be derived?" Moreover, in several of the works having a common title, close collaboration seems likely. The entry in the Aristotelian catalog, no. 75, *A Course of Lectures on Politics like That of Theophrastus*, may either be based on some general similarity between the extant *Politics* of Aristotle and a lost treatise of Theophrastus (perhaps, as already noted, the *Politics* in 6 books listed by Diogenes 5.45), or it may point to closer lines of connection or influence. The striking differences between the first and second parts of the *Constitution of the Athenians* (to chapter 41 and chapters 42–69),²⁷ and the perceived or postulated similarities between the second part and Theophrastus' *Nomoi*, have suggested to many scholars that the two are not independent of each other. Indeed, a cryptic passage in Philodemus' *Rhetorica*, apparently taken over from Epicurus, contains what appears to be a charge of plagiarism against Aristotle: ". . . and surely he implanted in his pupils great admiration of his genius, from the moment he abandoned his proper subject, and for the reasons given was found collecting along with the disciple (Theophrastus) the laws, the large number of constitutions, the pleas of the cities concerning territory, the treatise *Pros tous kairous*, and everything that belongs to such a subject."²⁸ "Was found collecting . . ." is Düring's rather tame translation of Philodemus' phrase *ephōrato tous te nomous synagōn*, where a closer rendering of the verb *ephōrato* would be, "was detected, thieflike." Bloch, in an important and wide-ranging study,²⁹ interpreted this "charge" levelled against Aristotle by Philodemus in the light of a comment by Aristotle himself at the end of the *Nicomachean Ethics*: "Laws are the product, so to speak, of the art of politics; how then can a mere collection of laws teach a man the science of legislation, or make him able to judge which of them are the best? . . . Very possibly, therefore, collections of laws and constitutions may be serviceable (*enchrēsta*) to students capable of studying them critically. . . . [But since] the question of legislation has been left uninvestigated by previous thinkers, it will perhaps be well if we consider it for ourselves, together with the whole question of the constitution of the State."³⁰ This passage seems to imply the priority of *tōn nomōn kai tōn politeiōn . . . synagōgai*

(1181b7) to *politika*, with the latter following after and dependent upon such collections. The inference Bloch draws from these two passages is boldly stated: "Aristotle not only composed the *Politeiai* along with his pupils, especially with Theophrastus, but he also suggested and actually began work on the *Nomoi* and on the *Politika pros tous kairous*, both finished and published after the master's death by Theophrastus."³¹ Others may wish to ask whether Philodemus' words can be made to bear such a weighty conclusion, and what if any evidence Epicurus had for such extensive "collaboration" between Aristotle and Theophrastus. On the other hand, even for those who do not accept the view that "Aristotle suggested [the *Nomoi*] and prepared with Theophrastus the material . . . upon which the pupil built up his work,"³² there can be no doubt that Theophrastus acquired from Aristotle an enthusiasm for research into political phenomena. In a revealing passage in the *Rhetoric* Aristotle comments on the use to which an orator (that is, a politician) may put not only historical, but comparative, politics: "With reference to acts of legislation, it is useful not only to understand what form of government is expedient by judging in the light of the past, but also to become acquainted with those in existence in other nations, and to learn what kinds of government are suitable to what kinds of people. It is clear, therefore, that for legislation books of travel are useful, since they help us to understand the laws of other nations."³³ This urge to compile a complete and wide-ranging set of specific cases before drawing theoretical generalizations or issuing practical instructions lies behind both the *Politeiai* and Theophrastus' *Nomoi*, to an examination of which we may now proceed.

Theophrastus' Named Treatises

The lack of an adequate modern edition of the *Nomoi*, which Bloch bemoaned in 1949,³⁴ has now been met with the publication in 1981 of a Princeton dissertation by A. Szegedy-Maszak.³⁵ Bloch himself characterized the treatise, in 24 books, as a work in which "Theophrastus treated all the branches of legislation systematically by comparing, discussing and criticizing the laws of all Greek states in connection with each and every legal institution."³⁶ *Systematically* is perhaps a subjective term. On the basis of his fr. 21, a long citation by Stobaeus from a section dealing with sale of land and moveable goods, Szegedy-Maszak comments on the apparent "absence of a rigorous point-by-point development" in the treatise;³⁷ "the discussion seems to proceed analogically, with one topic suggesting another."³⁸ This fragment also shows that, in addition to specific procedures, with examples cited from the diverse legal systems not only of Greece but elsewhere (fr. 18 S-M Boeotia, fr. 22 S-M Tyre), Theophrastus presented "a more speculative philosophical examination" of the theory behind the laws.³⁹

The work's "prescriptive quality" is noted;⁴⁰ it was intended as "a practical evaluative guide . . . an encyclopedia for legislators, which could be consulted to insure that a prospective law was the best one available."⁴¹ "For Theophrastus a complete notice of a law includes a statement of its terms, a specific example of its use, and an explanation of its intent."⁴²

Several fragments show connections with material in the *Constitution of the Athenians*. Fr. 8 S-M (102 W) concerns grants of *isoteleia* as a special dispensation awarded to certain metics; the *Constitution* 58.2 reports that lawsuits, *dikai*, brought before the polemarch include those involving metics, *isoteleis*, and *proxenoi*. Theophrastus comments that the Athenians occasionally granted *ateleia* to whole cities, like Olynthus and Thebes, a remark which, as Szegedy-Maszak points out, "raises some interesting historical problems"; he notes Philip's destruction of Olynthus in 348 B.C. and Alexander's of Thebes in 335.⁴³ Fr. 11 S-M (105 W) comes from what appears to be a discussion of poisoning as a type of homicide that fell under the jurisdiction of the Areopagus, fr. 9 S-M (104 W) touches on *phonos akousios*, and fr. 13 S-M provides a derivation for the court Phreatto, at which were heard cases of intentional killing or assault alleged to have been committed by those already in exile for involuntary slaying; all these topics are touched on very summarily in the *Constitution of the Athenians* 57.3.⁴⁴ According to Bloch, fr. 1 S-M, which dealt with certain functions of the *thesmothetai*, provided "valuable supplementary material" for the shorter treatment in chapter 59 of the *Constitution*.⁴⁵ Other important judicial topics are touched on in fr. 3 S-M (*katacheirotomia*, condemnation by show of hands), fr. 5 S-M *anadikos krisis*, reopening of a case due to perjury,⁴⁶ and fr. 2 S-M (101 W) penalties for unsuccessful prosecution of an *eisangelia*.⁴⁷

Some particularly knotty problems are raised by the discussion of ostracism in fr. 18a and b S-M. The citation exists in a longer and a shorter version, which together describe the procedure for ostracism and record its discontinuance at Athens after the ostracism of Hyperbolus.⁴⁸ In addition to an account of how ostracisms were actually carried out (where the figure of 6,000 is given as the number of votes needed to ostracize, not for a quorum, as in Plutarch *Aristeides* 7.6), our source for the longer version⁴⁹ also records the existence of similar procedures at Argos, Miletus, and Megara, and gives a partial list of ostracized Athenians, whom it characterizes as the "most respectable." It is uncertain how much, if any, of this can be credited to Theophrastus.⁵⁰ In his *Life of Nicias* (11.10) Plutarch cites Theophrastus (fr. 139 W) for the version of Hyperbolus' ostracism as brought about through collusion between Alcibiades and Phaiax (this is also the version that Plutarch gives at *Alcibiades* 13.8, although at *Aristeides* 7.3-4, Nicias is mentioned in place of Phaiax). Bloch argued that this citation belonged not to *Nomoi* but to another work, *Politika pros tous kairous*, on the grounds that in this

latter work Theophrastus mentioned the putative first ostracism, that of Theseus (fr. 131 W), an event which seems also to be referred to, although rather ambiguously, in the *Characters* (26.6).⁵¹ The evidence is, however, insufficient to place fr. 139 W definitely in either work.⁵²

Another fragment (fr. 23 S-M, 99 W) reports that Theophrastus ascribed the allegedly Solonian or Draconian *Nomos argias*, the law against idleness, to Peisistratus, "by which he made the countryside more productive and the city more peaceful."⁵³ Fr. 106 W is a reflection of a more general kind: "Good citizens need few laws, for it is not circumstances that are made for laws, but laws for circumstances"; its attribution to *Laws* is considered doubtful by Szegedy-Maszak.⁵⁴

A sixth-century Vatican palimpsest, Vat. Gr. 2306, contains an extensive section of a work which modern scholars unanimously attribute to Theophrastus.⁵⁵ On various a priori grounds⁵⁶ and on the basis of a general similarity of exposition between Vat. Gr. 2306 and the lengthy fragment dealing with laws of sale (fr. 21 S-M, 97 W) already discussed, the work from which the citation is drawn is now generally identified as the *Nomoi*, although its first editor, Aly, had assigned it to *How Cities are Best Governed* (5.45, 5.49). The modern label *De eligendis magistratibus* not only reflects the subject matter of the fragment B, but adverts to Cicero's reference to Theophrastus' having treated, among other topics, *de magistratibus* (*De legibus* 3.13, cited above).

Fragment A, of some 78 lines, has been seen as a discussion of the procedure for examination of magistrates, either before they assume office or after their terms are completed. Keaney disputes this view and maintains that it deals with the judicial procedure to be employed in capital cases involving mainly the interrogation of defendants. Four times in the A fragment a comparison is made to similar procedures at Sparta, as well as at Megalopolis and Epizephyrian Locri (once each). The author's comment, "which King Cleomenes did in the trial of Cleolas" (A^r, iii, 26-30), is generally taken as a reference to Cleomenes II, of whom A.H.M. Jones remarked, "Not a single action is recorded in his long and inglorious reign,"⁵⁷ a statement that will now have to be corrected, although the sources provide no further information about this trial.⁵⁸

The B fragment is longer (264 lines); its principal topic is, according to Szegedy-Maszak, "the selection and preparation of candidates for public office, with special emphasis on finding suitable people for the highest posts."⁵⁹ Of the three qualities deemed essential for aspirants to high office, namely, wealth (*ploutos*, *timēma*), innate ability (*aretē*) and experience (*empeiria*), too great emphasis should not be put on wealth,⁶⁰ for in a timocracy the state would have been deprived of the services of men like Epaminondas and Pelopidas, Iphicrates and Chabrias, Aristeides and Themistocles.⁶¹ To

illustrate the need of combining, in various boards of elected officials such as the generals, mature skill and experience with the energy and enthusiasm of youth, the author cites Hagnon's advice to constitute such boards in the way that hunters make up packs of hounds, putting in *skylakes* with more mature and experienced dogs. According to the author of the fragment, this principle was actually employed at Karystos and Kythnos (B^v, i, 134–35). The author then turns to practicalities: How can the state ensure that it gets the best (i.e., most experienced) men for the highest offices? "The man who is to hold greater magistracies should hold other (i.e., minor) ones before" (col. i, 170–76). In Phocis this is managed by requiring the generals to be chosen only from ex-phylarchs or ex-treasurers. Toward the end the passage becomes somewhat "abrupt and disjointed,"⁶² but the author seems to turn to the ineligibility for public office of those under investigation by the city (*epaitiōmenon*, col. iii, 255).

There are two occurrences in the fragment of the term *kairos*. The man of judgment is said to be able "in the best way to recognize (or distinguish) critical opportunities one from another" (*kairous gnōnai par' allo* [B^v col. ii, 77–78]) and "in this office (the generalship), especially, the most critical situations necessarily arise" (*malista oun en tautēi dei megistous anēkein kairous* [B^v, i, 140–43]).⁶³ This prompts some speculation about a possible connection between the B fragment and the work of Theophrastus entitled *Politika pros tous kairous*, or, in its shorter form, *Peri kairōn*, in four books (D.L. 5.45), on which Plutarch wrote an essay (now lost) in two books.⁶⁴ From the fragments actually or conjecturally attributed to this work, it is not easy to form a clear picture of its nature. Fr. 131 W, cited by the Suda-lexicon from the first book, reports that Theseus was the first victim of ostracism at Athens.⁶⁵ Likewise, from Book 1 comes the prescription to use politically more palatable terms for unpopular functions: the Spartan word *harmost* (arranger) is to be preferred to the Athenian *episkopos* (overseer) or *phylax* (guard) (fr. 129 W). From Book 2 is quoted a passage dealing with a technique by which tyrants such as Dionysius of Syracuse, the builders of the Egyptian pyramids, and the Cypselids of Corinth undertook military expeditions and ambitious public-works projects as a means of distracting opposition to their rule (fr. 128 W).⁶⁶ Papyrus Oxyrhynchus 7.1012 cites the *Peri kairōn* for an incident from the career of Themistocles involving his arbitration of a dispute between Corinth and Corcyra in the latter's favor; Corinth had to pay Corcyra twenty talents and, according to the fuller account given by Plutarch (*Them.* 24.1), where Theophrastus is not named, both were to share in the administration of the colony of Leucas.⁶⁷

Potentially more informative is fr. 134 W, cited by Plutarch twice: in the *Life of Alcibiades* 10.4 and *Praecepta gerendae rei publicae* 804A. In both places Theophrastus is cited for Alcibiades' hesitation in choosing his

words during public debate. In the *Life of Alcibiades*, Plutarch seems to be quoting Theophrastus' own words when he says that Alcibiades was "most adept at discovering and planning what was necessary" (*heurein . . . ta deonta kai gnōnai*); he searched not only for the appropriate subject matter (*ha dei legein*) but for the right words and phrases (*hōs dei* [sc. *legein*] *onomasi kai tois rhēmasin*, *Alc.* 10.4). In chapter 8 of his essay *Præcepta gerendae rei publicae*, Plutarch is advising statesmen to think carefully about what they are going to say, being prepared to adapt their speech to sudden changes of situation:

For occasions arise quickly (*oxeis gar hoi kairoi*) and often bring with them in public affairs sudden developments. That is why Demosthenes was inferior to many, as they say, because he drew back and hesitated when the occasion called for the opposite course (*para ton kairon*). And Theophrastus tells us that Alcibiades, because he planned, not only to say the right thing, but to say it in the right way (*mē monon ha dei legein, alla kai hōs bouleuomenon*), often while actually speaking would search for words and arrange them into sentences, thereby causing hesitation and failure. But the man who is so moved by the events which take place and the opportunities which offer themselves (*hypo tōn kairōn*) that he springs to his feet is the one who most thrills the crowd, attracts it, and carries it with him.⁶⁸

In the next chapter Plutarch remarks that Cato, when he saw he could not use persuasion to carry his point, was prepared to filibuster the whole day, "thus destroying his opponents' opportunity" (*kairon*, 804C). The context suggests that the *kairoi* of Theophrastus' title were "critical moments" which called for all the rhetorical skill a politician could muster if he was to turn them to best advantage, or at least meet adequately the challenge to his political inventiveness presented by these "crises." Such, at any rate, seems to be the implication of Cicero's remark that, although both Aristotle and Theophrastus wrote treatises on the proper qualifications of a statesman and the best form of constitution, Theophrastus carved out as his own the topic *quae essent in re publica rerum inclinationes et momenta temporum quibus esset moderandum utcumque res postulare*.⁶⁹ In fact, although the term *kairos* has a fairly wide range of meanings in ancient authors, the basic sense seems to be of a *momentum temporis*, an unforeseen confluence of circumstances which, if the individual human agent but have the necessary quick-wittedness to do so, he may turn to his advantage: "a tide in the affairs of men which, taken at the flood, leads on to fortune."⁷⁰ "The opportunities of war wait for no man," Pericles warns the Athenians on the eve of the outbreak of the Peloponnesian War.⁷¹ The Mytilenaeans tell the Spartans at Olympia in 428 B.C. that they saw "a *kairos* as never before" to revolt from Athens,

and so they seized it (Thuc. 3.13.3). The “enlightened” tyrant, according to Aristotle, should make a show of the fairness of his tax-measures which he may need to use *pros tous polemikous kairous* (*Politics* 1314b16). *Kairos* in war, Aristotle further remarks, falls under the purview of the science of generalship, *kairos* in illness—under medicine (*Eth. Nic.* 1096a32).⁷²

If my guess is correct that Theophrastus’ discussion often (even if not always) involved use of *kairoi* by politicians in speaking, it may be possible to reinterpret the citation in Papyrus Oxyrhynchus 7.1012. Before citing Theophrastus, the author alludes to Thucydides’ version (1.136) of Themistocles’ escape from Athens: “He escaped to Corcyra because he had done them a good service; this service . . .” Unfortunately, there is a lacuna in the papyrus at this point, but it is possible that the author intended, on the basis of the account in Theophrastus, whom he is on the verge of citing, to tell how Themistocles alluded to his previous benefaction in his speech before the Corcyraeans and pleaded with them to give him asylum. That he made such an appeal is likely enough in itself, and is implied by Thucydides in his brief account which, after mentioning Thucydides’ arrival at Corcyra, continues, “The Corcyraeans said that they were afraid to keep him so as to incur the enmity of the Spartans and Athenians.” Likewise with fr. 129 W, a context might be imagined in which a Spartan politician (say, Lysander) explained why the Spartans gave the term *harmost* to the governors whom they stationed in cities under their control. For the other certainly ascribed citations, frs. 128 W (tyrants’ make-work projects) and 131 W (Theseus’ putative ostracism), it is not so easy to see their relevance to a treatise which dealt with opportunities for political oratory. Nor does any obvious *kairos* figure in the two stories reported, explicitly on Theophrastus’ authority, by Parthenius in his *Erôtika pathēmata*; in the first (number 9) a certain Polycrite of Naxos involves her lover, an Erythraean general named Diognetus, in an act of treachery against his allies, the Milesians, who are besieging the Naxians, while the second (number 18) relates an act of amorous betrayal by a Milesian lady, Neaira, of her husband’s friend, a Naxian, an act which results in a war between the two states.⁷³

Naturally, our notion of the work’s underlying theme (if it had one) will influence our willingness to ascribe other Theophrastean citations to it. Bloch argued that two items recorded from Theophrastus by Plutarch in his *Life of Nicias* were drawn from the *Peri kairôn*: Nicias’ alleged bribery to influence the allotment-process at the time of the peace which he helped conclude with Sparta (*Nic.* 10.1 = fr. 138 W) and the political deal, already alluded to, whereby Alcibiades and Phaiax (others said Nicias) conspired to have Hyperbolus ostracized (*Nic.* 11.10, cf. *Alc.* 13.8 = fr. 139 W).⁷⁴ In addition, attempts have been made to detect a Theophrastean source for other stories told by Plutarch, on grounds of similarities with material for

which Theophrastus' authority is cited. Thus (in tabular fashion): *Mul. virt.* 249B–D, the Milesian women's suicidal mania cured by a law that their corpses should be carried naked through the marketplace for burial;⁷⁵ *ibid.* 261E–262D, Xenocrite of Cumae and her heroic assistance of those plotting against the tyrant Aristodemus, who was "wearing out the citizens with toils and labours";⁷⁶ *Narr. amat.* 772D–773B, the romantic involvement of Archias of Corinth with an individual who traced his descent from an Argive confidant of Pheidon;⁷⁷ *Praec. ger. rei publ.* 825B–C, personal love affairs that affected public events at Delphi and Syracuse;⁷⁸ *ibid.* 818E–F, Demades' diversion of monies intended for a fleet against Alexander to the festival of Choes;⁷⁹ 799D–E, the Carthaginian Hanno, the first lion-tamer.⁸⁰

We may turn from these conjectures and speculations to several miscellaneous quotations of material with historical content, where the title of the work by Theophrastus is also given. From the work *On Pleasure* (D.L. 5.44) come two citations: one deals with a contrast between Aristides' poor but glorious life and the disreputable luxury of Smyndirides the Sybarite and Sardanapalus (fr. 84 W = L111 F); the other with the fun-loving Ionians, who carried luxury to such a height that they became proverbial (fr. 86 W = L109 F).⁸¹ In *On Drunkenness* (D.L. 5.44), Theophrastus recorded laws against drunkenness in various cities: at Epizephyrian Locri Zaleucus had enjoined the death penalty for drinking neat wine otherwise than on the advice of a physician, and women were prohibited from drinking wine entirely at Massalia and Miletus (fr. 117 W = L140 F).⁸² In *To Cassander on Kingship* (D.L. 5.47) reference was made to the luxurious tastes of the Persian kings, who offered a large sum of money to anyone who might suggest to them a new source of pleasure (fr. 125 W). Plutarch in his *Life of Themistocles* 25.1 quotes Theophrastus' *On Kingship* (D.L. 5.42, 49) for a dubious incident in Themistocles' career—he was alleged to have enflamed the crowd at the Olympic games to debar Hieron from competing (fr. 126 W).⁸³ Also from the work *On Kingship* comes a definition of *aisymnêtai* as "elected tyrants" (fr. 127 W).⁸⁴ A story of how Pericles on his deathbed pointed dismissively to an amulet given him by an old woman to avert such illnesses is ascribed by Plutarch (*Per.* 38.2) to Theophrastus' *Ethics* (fr. 146 W = L 21 F); since no work by this title is attested in the catalog, Usener assigned it to *On Piety* (p. 224.23).⁸⁵ Fr. 165 W, the thunderous roar of a volcanic eruption in the Aeolian islands heard as far away as Tauromenium, is cited as from *Historika Hypomnêmata* (or *Research Memoranda*), a work not otherwise attested, unless this be the same as the title *Hypomnêmata*, in one book (D.L. 5.49).⁸⁶ Finally, there is a scattering of material throwing light on the contemporary social history of Athens in the *Characters*.⁸⁷

UNASSIGNED CITATIONS

There are a considerable number of ascriptions of historical material to Theophrastus for which no specific title is given. Wealth gives no advantage over moderate means or poverty in achieving public renown—witness Callias, Ismenias, Socrates, and Epaminondas (fr. 78 W).⁸⁸ The general Dinon of Taranto (otherwise unknown) held up his hand in an assembly meeting when the vote was going against him and said, “this (vote) is stronger” (fr. 133 W). When Archestratus saw Aristophon’s painting of Nemea seated with Alcibiades in her arms, he commented that Greece could not have tolerated two Alcibiades (fr. 135 W; a similar remark is quoted about Lysander). The last deeds of the Athenian general Philocles after the defeat at Aegospotami and his retort to Lysander illustrate his outspokenness and courage (fr. 137 W). An incident was reported in connection with a proposal by the Samians to transfer the League treasury from Delos to Athens to illustrate the difference between Aristеides’ probity in private life and his pragmatic approach to public affairs (fr. 136 W).⁸⁹ A general should die the death of a general, not that of a common peltast (fr. 140 W). The Spartan ephors fined King Archidamus for marrying a short wife on the grounds that she would bear them not kings but kinglets (fr. 141 W). The aged Agesilaus, in Egypt in 361 B.C., though treated with contempt by some, was sent royal gifts, among which he found the papyrus crowns particularly pleasing because of their “neatness and simplicity” (fr. 142 W). In his *Demosthenes* (10.1) Plutarch cites Ariston of Chios, who quoted Theophrastus’ remark that Demosthenes was an orator worthy of his city, Demades an orator too good for his city (fr. 144 W).⁹⁰ When the Greek cities allied with Athens asked that the tribute be limited, the demagogue Hegesippus replied, “War is not fed with any fixed ration” (fr. 145 W). Hieronymus of Rhodes quoted Theophrastus for the report that Alexander was afraid of being womanish and so being disinclined to heterosexual intercourse (fr. 147 W = L139 F).

A number of “uncollected” historical fragments can be added to those in Wimmer.⁹¹ At *Solon* 4.7 Plutarch recounts the story of Periander’s summoning of a congress of the Wise Men at Delphi, and the subsequent affair of the tripod: “According to Theophrastus, the tripod was first sent to Bias at Priene, and after that to Thales at Miletus at Bias’ request. In this fashion it went round to all the Wise Men, until it returned again to Bias and was finally sent back to Delphi.”⁹² According to Plutarch (*Them.* 25.3), Theopompus (*FGrH* 115 F 86) gave the amount of wealth confiscated after Themistocles’ death as 100 talents, but Theophrastus said it was 80, even though he was not worth three talents when he first entered public

life.⁹³ Besides the citation already noted (fr. 146 W), Plutarch refers to the testimony of Theophrastus twice more in *Pericles*, for Pericles' alleged ten-talent annual payoff to Sparta (*Per.* 23.2),⁹⁴ and for the name of Pericles' prosecutor, Simmias (*Per.* 35.5).⁹⁵ After defeating the Carthaginians at Himera in 480 B.C., Gelon made a condition of peace that they stop sacrificing children to Baal.⁹⁶ In the *Apophthegms of Kings and Commanders* Plutarch refers to Theophrastus for the view that Philip of Macedon was greater and more moderate (by implication, than his son Alexander) (= L108 F) owing to his fortune and his conduct (*Mor.* 177 C). Athenaeus 10.435E (= L108 F) quotes Theophrastus for an explanation of the term *Dionysiokolakeis* (Dionysius flatterers): these were companions of the tyrant Dionysius II who rose to a new height of flattery by pretending not to notice how much he (and they) were eating and drinking, and who even allowed their hands to be guided by the tyrant to the cups and plates set before them.⁹⁷ Finally, twice in the *Life of Demosthenes* the manuscripts offer the variants Theophrastus/Theopompus—when, on a certain occasion, the Athenians called on Demosthenes to impeach someone and made an uproar when he refused to comply, he silenced them with the remark, "You may have me as your adviser, not your toady" (14.4); and after the expulsion of Harpalus, the Athenians organized a thorough search of all the orators' houses except Callicles', who was exempted because of the fact that he was recently married and his bride was living there (25.7).⁹⁸

CONCLUSION

We have seen that Theophrastus fits into a Peripatetic tradition of politico-historical inquiry that originated with Aristotle, with whom he may have collaborated on either the *Politeiai* or the *Nomoi*. Duplication of certain titles between the two may indicate that the catalogers (perhaps going back ultimately to Hermippus) were uncertain to whom to attribute the work in question. Of the extensive list of titles in the Theophrastean catalog, 16 or 17 appear to have had a heavily if not exclusively historical concentration, although historical details were to be found in other, nonhistorical, treatises. Of these we have a relatively clear picture of *Nomoi*, a somewhat less clear one of *Politika pros tous kairous* (*Peri kairōn*). Of the rest, impressions can hardly be formed beyond a priori inferences from such titles as *On Tyranny*, *How Cities are Best Governed*, etc. The miscellaneous citations scattered through Plutarch, Athenaeus, and other ancient writers show Theophrastus to have been a conscientious collector and recorder of historical information, some of it rather recherché. How astute a political commentator he was, and the degree to which he may have improved upon Aristotle in this regard, we have, on the present state of the evidence, no way of knowing.

BIBLIOGRAPHY

Subsequent references to the works are given by author's name only:

- Wolfgang Aly, *Fragmentum Vaticanum "De eligendis magistratibus" e codice bis rescripto Vat. gr. 2306* [*Studi e Testi*, 104] (Vatican City 1943).
- Herbert Bloch, "Studies in Historical Literature of the Fourth Century B.C.," *HSCP* Suppl. 1 [*Athenian Studies presented to W.S. Ferguson*] (1940) 303-76, esp. Sect. III, "Theophrastus' *Nomoi* and Aristotle," 355-76.
- Gabriella Bodei Giglioni, "Immagini di una società. Analisi storici dei 'Caratteri' di Teofrasto," *Athenaeum* n.s. 68 (1980) 73-102.
- W. Robert Connor, and John J. Keaney, "Theophrastus on the End of Ostracism," *AJP* 90 (1969) 313-19.
- Ferdinand Dümmler, "Zu den historischen Arbeiten der ältesten Peripatetiker," *Rh. Mus.* n.f. 42 (1887) 179-97 [= *Kleine Schriften* II (Leipzig 1901) 463 ff.].
- H.B. Gottschalk, *Heracleides of Pontus* (Oxford 1980).
- H. Henkel, *Studien zur Geschichte der griechischen Lehre vom Staat* (Leipzig 1872).
- John J. Keaney, "Theophrastus on Greek Judicial Procedure," *TAPA* 104 (1974) 179-94.
- John J. Keaney, and Andrew Szegedy-Maszk, "Theophrastus' *De Eligendis Magistratibus*: Vat. Gr. 2306 Fragment B," *TAPA* 106 (1976) 227-40.
- Karolus Mittelhaus, "*De Plutarchi 'Praeceptis gerendae reipublicae'*" (diss. Berlin, 1911) Sect. IV, "De Theophrasti *Politikois pros tous kairous* vestigiisque doctrinae Peripateticae," 29-55.
- Paul Moraux, *Les Listes anciennes des ouvrages d'Aristote* (Louvain 1951).
- James H. Oliver, "The Vatican Fragment of Greek Political Theory," *GRBS* 18 (1977) 321-39.
- Walter Pötscher, "Theophrastos," *Der. kleine Pauly* V (Munich, 1975) 720-25.
- Antony E. Raubitschek, "Theophrastos on Ostracism," *C & M* 19 (1958) 71-109.
- Otto Regenbogen, "Theophrastos," *RE* Suppl. 7 (1940) 1354-1562, esp. III.4.c, "Politik" 1516-21.
- Andrew Szegedy-Maszk, *The "Nomoi" of Theophrastus* (New York 1981).
- Hermann Usener, "Analecta Theophrastea," in his *Kleine Schriften* I (Leipzig 1912) 50-90.
- F. Wimmer, *Theophrasti Eresii Opera* (Leipzig 1862; Paris 1866).
- E. Zeller, *Aristotle and the Earlier Peripatetics*, English trans. (London 1897).

NOTES

1. *FGrH* vol. III B, Suppl. i, 311 (on Philochorus 328 F 19).
2. Gottschalk 3 ff.
3. Gottschalk 132-33; not only the title is shared with Theophrastus, but an interest in Solon (frs. 146-49 Wehrli, *Die Schule des Aristoteles*).
4. Frs. 11-19 Wehrli.
5. Henkel 24-25. Bloch 366 calls him "the most ingenious of Aristotle's pupils" and notes the connection between Dicaearchus' travel accounts and Aristotle's comment on the usefulness of *gês periodoi* as providing information about *tous tôn ethnôn nomous* (*Rhet.* 1360a34).

6. Henkel 23–4, citing Cicero's comment (*De legibus* 3.14) that Demetrius brought his *doctrina* to the test of frontline politics (*discrimen aciemque*). Cf. W.S. Ferguson, "The Laws of Demetrius of Phaleron and Their Guardians," *Klio* 11 (1911) 265–76, at 268 ff. (See further Bloch 371 with n. 2 for a specific overlap between Theophrastus' *Nomoi* fr. 6a S[zegedy]—M[aszak] and Demetrius fr. 146 Wehrli.
7. An Aristotelian nucleus for the *Ath. Pol.* is indisputable, though the degree of direct involvement by Aristotle himself has been debated. See P.J. Rhodes, *A Commentary on the Aristotelian "Athenaion Politeia"* (Oxford 1981) 48–53; *contra*, J.J. Keaney, *LCM* 5 (1980) 51–56.
8. The catalog is preserved in Diogenes Laertius 5.22–7; numeration as in Moraux 22–27.
9. This is generally identified as the extant *Politics*; the work of Theophrastus to which this may refer is discussed below.
10. As Moraux 96 notes, this should be distinguished from an abstract discussion of justice and refers rather "à la nature et à l'exercice du pouvoir judiciaire."
11. Szegedy-Maszak 79–80, with n. 182, suggests that this might have been commissioned by Philip for his use in dealing with the Greek cities.
12. The list may derive from Hermippus (Zeller II. 352 n. 4; Bloch 357 n. 4; P.M. Fraser, *Ptolemaic Alexandria* [Oxford 1972] I. 453, with II. 655 n. 48); discussion by Usener, Henkel 19–22, Regenbogen 1516, W. Pötscher 723a.
13. It is not clear how this work relates to the twice-listed titles; *On Kingship* (5.42 and 49). For duplication of titles, sometimes with slight variations, see Usener 62 ff.
14. According to Gottschalk 89 n. 4, Heracleides' *Peri biōn* "probably contained a comparison of the philosophical and worldly way of life."
15. B. Perrin, *Plutarch's "Nicias"* and "*Alcibiades*" (New York 1912) 35.
16. Moraux 41 cites Proclus' remark that Aristotle "made an Epitome of (*epitēmnesthai*) the *Republic*"; cf. Usener 65–66: "... nisi ab adolescentulo in praeceptoris usum perscriptam esse existimaveris." Henkel 21 enquires why both could not have written such a *Compendium*.
17. *De legibus* 2.15; *ad Atticum* 6.1.10. Zaleucus' name also occurs in fr. 117 W = L140 Fortenbaugh (*Quellen zur Ethik Theophrasts*, which is Bd. 12 of *Studien zur antiken Philosophie*), apparently from *Peri methēs* (see Szegedy-Maszak, App. I B, p. 89). Citations are preserved from a work *On Lawgivers* by Hermippus.
18. Moraux 96 n. 2.
19. Regenbogen 1521. He conjecturally assigned to the work fr. 111 W = L123 F (beauty contests for males at Elis, with weapons as prizes), and 112 W = L124 F (contests for women in sobriety and home management).
20. Keaney 1974, 181 n. 7; *Vat. Graec.* 2306 fr. A, to be discussed below, was assigned to this work by Aly.
21. Usener 63, Henkel 21.
22. Schol. Apollonius of Rhodes 4.834; fr. 165 W.
23. Regenbogen 1521 and 1540. To the *Peri historias* he assigns Theophrastus' comment, cited by Cicero (*Orator* 12. 39), that it was Herodotus and Thucydides who "roused history to dare to speak in a richer and more ornate style (*uberius et ornatus*) than their predecessors had used."
24. "Some say that the work is by Sosibius" (Athenaeus 4.144 E; fr. 125 W). There are allusions to Cassander and events of (apparently) 319 B.C. in *Characters* 8. For Sosibius see T. Boring, *Literacy in Ancient Sparta* (Leiden 1979) 55–58.
25. Regenbogen 1541.

26. The reading is doubtful. Long accepts Cobet's emendation *-kou* for *-ka* or *-kôn* of the manuscripts, and Henkel 21 refers to Cicero's comment (*De finibus* 5. 11) that both Aristotle (in a similarly titled *Politikos*, no. 4 in the Aristotelian catalog discussed above) and Theophrastus discussed *qualem in re publica principem esse conveniret*.
27. Rhodes (above, note 7) 5.
28. Philodemus, *Volumina Rhetorica* ed. S. Sudhaus (Leipzig 1896; repr. 1964) II. 57. The translation is based on that of I. Düring, *Aristotle in the Ancient Biographical Tradition* (Göteborg 1957) 306, although I have given a more literal rendering of the concluding phrases.
29. See Bloch, in the bibliography above.
30. *EN* 10.9 1181a25–b14, trans. H. Rackham (Loeb Classical Library).
31. Bloch 363; cf. Mittelhaus 45.
32. Bloch 366. It is put in an elegant and positive way by Zeller: Theophrastus "was in an especial degree fitted for the work of strengthening, extending and completing the system which [Aristotle] had left behind him" (Engl. trans.) II. 351.
33. *Rhet.* 1.4.13 1360a30–7, trans. J.H. Freese (Loeb Classical Library).
34. Bloch 353.
35. References to the fragments of the *Nomoi* are to the edition of Szegedy-Maszak and carry the identification "S-M."
36. Bloch 357–58.
37. Szegedy-Maszak 84.
38. *Ibid.* He also refers to what may seem to be "chaotic presentation of the material" (*ibid.*).
39. Szegedy-Maszak 64; Zeller II. 357–58: "his own inclinations . . . have an unmistakable bias in the direction of particulars rather than fundamental principles."
40. Szegedy-Maszak 86.
41. *Ibid.*, 85, 86.
42. *Ibid.*, 65.
43. *Ibid.*, 34–35.
44. See Bloch 369.
45. *Ibid.*, 369–70; cf. A.R.W. Harrison, *The Law of Athens, II. Procedure* (Oxford 1971) 13–15.
46. Harrison (preceding note) II. 194–97.
47. Bloch 374 notes the similarity with *Ath. Pol.* 63.3.
48. Szegedy-Maszak 51–4, following Bloch 357 ff., who first recognized the "longer" version in a scholion to Aristoph. *Equites* 855. Cf. Raubitschek and Connor/Keaney 1969.
49. See preceding note.
50. For differing views see Bloch 369; Szegedy-Maszak 55; and Connor/Keaney 1969.
51. Bloch 358 n. 1.
52. Raubitschek assigned fr. 139 W to the *Nomoi* and argued that Theophrastus' treatment formed the basis ("directly") of Philochorus 328 F 30 and ("indirectly, through Timaeus") of Diodorus 11.55 and 87.
53. Cited by Plutarch, *Solon* 31.5; the translation is by Szegedy-Maszak (the law is ascribed to Draco by Plutarch, *Sol.* 17.2 and Lysias, fr. 10 p.236 Scheibe; Herodotus 2.177 attributes it to Solon, who is said—impossibly—to have taken

- it from Amasis); Peisistratean measures in a similar vein (with no mention of a *nomos argias*) at *Ath. Pol.* 16.2–4.
54. Szegedy-Maszak 77, 78 (his fr. 26); Henkel 20 assigns it to the work *Peri nomôn* in one book (D.L. 5.47), or *Peri paranomôn* (5.47).
 55. The *editio princeps* is by Aly; most accessible in Keaney 1974 and Keaney/Szegedy-Maszak 1976, or Oliver.
 56. "Theophrastus' most famous work in this area" (Keaney 1974, 181); "the political work of Theophrastus most likely to have survived in the sixth century" (*ibid.*, 181 n. 8, where D.M. Lewis is cited).
 57. A.H.M. Jones, *Sparta* (Oxford 1967) 148; Keaney 1974, 192 n. 30.
 58. Oliver 325; Keaney 1974, 192, notes that Theophrastus mentioned Cleomenes II in *Politika pros tous kairous*.
 59. Szegedy-Maszak 102.
 60. Commentators note that the discussion is couched in Aristotelian terms (*Politics* 1266a8 ff, 1309a33 ff.) and that there may be implicit criticism of Plato (*Laws* 759E); cf. Szegedy-Maszak 96 ff.; Keaney/Szegedy-Maszak (1976) 229–39.
 61. That poverty was not (or at least, should not have been) a barrier to high office at Athens was a theme at least as old as the Funeral Oration ("nor is anyone who can do the city some good prevented from doing so through poverty, because of the obscurity of his reputation," Thuc. 2.39.1); Epaminondas' proverbial poverty also at fr. 78 W.
 62. Szegedy-Maszak 112.
 63. The translation of the first passage is based on Oliver 330; that of the second is by Keaney/Szegedy-Maszak 1976, 235. A propos the second passage Oliver 337 notes Sbordone's citation (277 n.2) of Xen. *Hell.* 6.5.33, where the Spartan ambassadors at Athens in 370 B.C. remind the Athenians that the two powers had always stood together *en tois megistois kairois*, to their mutual advantage.
 64. Lamprias Catalogue no. 53.
 65. Followed by Schol. Aristoph. *Plut.* 627 and Eusebius *Chron.* II, p. 51b Schöne. As already mentioned, the same event seems to be referred to, although in rather vague terms, at *Characters* 26.6: Theseus was the first one to be ruined [*apolesthai*] by the Athenians. Raubitschek 78 n. 3 denies that Theophrastus used the term *ostracized*; see, in general, R. Thomsen, *the Origin of Ostracism* (Copenhagen 1972) 13–14.
 66. The theory is Aristotelian: *Pol.* 1313b18 ff., where the same examples are given.
 67. P. Oxy. 7.1012 C (fr. 9) ii, lines 23–33, not in Wimmer. See Mittelhaus 33–34; F.J. Frost, *Plutarch's "Themosticles", a Historical Commentary* (Princeton 1980) 201–3.
 68. *Mor.* 803F-804A; the translation is by H.N. Fowler (Loeb Classical Library, *Plutarch's "Moralia,"* vol. X). See Mittelhaus 38–39, who cites *Mor.* 80C–D, where Demosthenes and Alcibiades are again named as speakers who "let slip the *kairos*."
 69. *De finibus* 5. 11; see Henkel 22.
 70. *Julius Caesar* IV. 3. 217–18. Theophrastus' *Char.* 12 is *akairia* (inopportuneness). For *kairos* in rhetorical contexts Raubitschek 78 n. 3 cites L. Radermacher, *Artium Scriptores* (Vienna 1951) 48–49, who aptly refers to Plato, *Phaedr.* 272A, *proslabonti kairous tou pote lekteen kai epischeteon . . . toutôn eukairian te kai akairian diagnonti . . .*, William H. Race, "The Word *Kairos* in Greek Drama," *TAPA* 111 (1981) 197–213, at 205 shows that the phrase *pros* (or *es*) *kairon* usually means "successfully," "to advantage." In an interesting paper presented to the 1982

- American Philological Association meeting, G.W. Most argued that in philosophical contexts "the term *kairos* denotes those external conditions, independent of an agent, which must be fulfilled if the agent's subjective desire is to achieve success in action" (114th Annual Meeting, *Abstracts*, p. 96). Cf. John R. Wilson, "KAIROS as 'Due Measure,'" *Glotta* 58 (1980) 177-204; Idem., "Kairos as 'Profit,'" *C.Q.* 31 (1981) 418-20. Also of interest is Pausanias (5.14.9), who mentions both an altar to *kairos* by the entrance to the stadium at Olympia and a hymn by Ion of Chios (742 *PMG*) describing *kairos* as "the youngest of Zeus' children."
71. Thuc. 1.141.2; cf. Xen., *Hell.* 6.5.33, quoted in n. 63 above and Lysias, *Olympiakos* (cited by Dion. Hal., *Lys.* 30): "the *kairos* to come is no better than the *kairos* at hand."
 72. Cf. Hipp. *Aph.* 1 (V. 458 Littré): *ho de kairos oxys* (cf. Plutarch *Mor.* 804A, quoted above). *Kairos* is defined as *chronos deôn* at *Prior Anal.* 1. 48b36, but in *Const. of the Athenians* it is used eight times simply as an equivalent of *chronos*.
 73. Cf. Plutarch's *Mul. virt.* 254B-F, where Theophrastus is not named: Henkel 23; Dümmler 180 ff.
 74. Bloch 358 n. 1. Bloch's only argument of substance is the connection with the "alleged ostracism of Theseus" (fr. 131 W). Fr. 138 W was ascribed to the *Politika pros tous kairous* by Mittelhaus 36-37.
 75. Mittelhaus 35-36.
 76. Dümmler 186-87.
 77. *Idem.*, 188-89, who suggests that this story comes from either the *Peri kairôn* or the *Erôtikos* (D.L. 5.43).
 78. Henkel 23, followed by Mittelhaus 39-40. Mittelhaus' thesis that Plutarch in his essay *Praecepta gerendae rei publicae* (*Politika parangelmata*) persistently depends on Theophrastus was accepted by K. Ziegler, "Plutarchos von Chaironeia (2)," *RE* XXI.1 (1951) 818-19; E. Valgiglio, *Plutarco, "Praecepta gerendae rei publicae"* (Milan 1976) xix; and G.J.D. Aalders, *Plutarch's Political Thought* (*Verh. Ned. Akad.*, afd. Letter., n.r., deel 116 [Amsterdam 1982]) 64, who refers to "Theophrastus, whose nonpreserved works in the area of political theory and state institutions have been very significant and whose influence upon Plutarch may not be underestimated" (*ibid.*).
 79. Mittelhaus 42-43. (He also ascribes to Theophrastus the story that Phocion countered a plan to invade Boeotia *para kairon* [*Mor.* 819A] or *akairôs* [*Mor.* 791F; cf. also *Phoc.* 24.3-5] by proposing that men to the age of 60 be called up [43 n.1].)
 80. Mittelhaus 46.
 81. L111 F and L109 F refer to Fortenbaugh's edition of Theophrastean ethical texts (above, note 17). In his *On Pleasure* Heracleides of Pontus touched on the luxury of the Athenians, Samians, Sybarites, and Milesians (Gottschalk 89 ff.).
 82. See Szegedy-Maszak, App. I B, p. 89; Dümmler 190 ff.
 83. Suspiciously like the story told of Lysias and Dionysius II: see Ph. Gauthier, *REA* 68 (1966) 31-32; Frost (note 67 above) 206.
 84. Theophrastus is following Aristotle (*Pol.* 1285a31).
 85. Usener 68-69. See G.J. de Vries, "Theophrastus on Pericles' Last Illness," *Mnem.* 28 (1975) 193.
 86. So Usener 59; cf. the title listed as *Aristotelian or Theophrastean Hypomnēmata* (D.L. 5.48); Mittelhaus 45.
 87. See Bodei Giglioli in the Bibliography.

88. See note 62 above.
89. From Plutarch, *Arist.* 25.2 (whether or not to continue the citation down to 25.3 depends on whether we read *phésin* here with one group of manuscripts or *phasin* with another). Mittelhaus 37 assigns this to the *Peri kairôn*, as well as the story of how Aristides dealt with disaffection before Plataea (*Arist.* 13). There is a strikingly similar story regarding Themistocles and Aristides at *Them.* 20.2.
90. Mittelhaus 38–39 follows H. Mayer in assigning this to the *Peri lexēōs* (D.L. 5.47). It is possible that Theophrastus was cited again in *Dem.* 10.3, if we read “Theophrastos” instead of “philosophos.”
91. See W.C. Helmbold and E.N. O’Neil, *Plutarch’s Quotations* (Baltimore 1959) 69–70.
92. Trans. I. Scott-Kilvert.
93. Cf. Frost (note 67 above) 208, who compares Vat. Gr. 2306, B fragment, lines 18–35 (worthy men like, among others, Themistocles, would not have been elected general if there had been a property qualification); he suggests the citation comes from *Peri kairôn* or *Peri basileias*.
94. Theophrastus is classed among the *enioi* who made this a continuing rather than a one-time bribe; it is unclear how much of Plutarch’s subsequent comment can also be ascribed to Theophrastus: “Pericles was in fact buying not peace but time in which to prepare in a leisurely way and make war more efficiently” (Scott-Kilvert’s translation). Mittelhaus 36 thought the work was *Peri kairôn*.
95. This was a disputed point: Heracleides of Pontus had given the name as Lacrateides and Idomeneus named Cleon.
96. Schol. Pindar *Pyth.* 2.3 (II. 32 Dr.), where the source is called “Theophrastus’ book *On the Etruscans*,” which is not otherwise known. (See Szegedy-Maszk, App. I C, p. 90, who denies Dareste’s suggestion that this was a book of the *Nomoi*.) The story is also told by Plutarch (*Mor.* 175A, 552A) who, however, does not name Theophrastus.
97. Kaibel *ad loc.* suggests the source might be *Peri kolakeias* (D.L. 5.47).
98. “Theopompos” is the reading of some manuscripts, “Theophrastos” of others. Jacoby retains the former (*FGrH* 115 Ff 327 and 330), Ziegler in his edition of Plutarch the latter.

12

Theophrastus and the Theory of Style

Doreen C. Innes

Theophrastus was a noted stylist. His original name, Tyrtamus, is said to have been changed to Theophrastus by Aristotle because of his godlike style, *to tēs phraseōs thespesion*.¹ Later critics highlight his sweetness: e.g., Cic. *Acad.* 1.33 *oratione suavis*, *Brut.* 121 *quis Theophrasto dulcior?* Yet this apparently individualizing description disappears on closer view, since (1) Aristotle has this same *suavitas*, e.g., *Qu.* 10.1.83 and especially Cic., *De or.* 1.49, where both are *suaves atque ornati*; and (2) elegance of style is characteristic of the Peripatetics generally, as we see from Cicero² and Demetrius;³ and though Cicero has Aristotle and Theophrastus primarily in mind, Demetrius' example is drawn from another Peripatetic, Dicaearchus. Sweetness is also claimed for two further Peripatetics: Lycon, who by an inevitable pun is called *glykytatos* (fr. 18 Wehrli), and especially Demetrius of Phaleron,⁴ who "delighted (*delectabat*) rather than inflamed the Athenians . . . for he had come from the shady retreats of the learned Theophrastus" (Cic., *Brut.* 37). So, too, with Theophrastus' theory of style. He was undoubtedly very influential—significant fragments survive—yet his own original contribution is hard to distinguish from those of Aristotle and other Peripatetics.

The influence of the Peripatos on rhetoric and prose style was strong. The major contributors were Aristotle and Theophrastus (Cic., *De or.* 1.43), but others of the school continued the tradition (*Qu.* 3.1.15), and some fragments survive of Demetrius of Phaleron, Dicaearchus, Heraclides Ponticus, Hieronymus, and Praxiphanes.⁵ We cannot therefore assume that early Peripatetic material that is not in Aristotle must be from Theophrastus. In particular, Book 3 of Cicero's *De oratore* reflects a general Peripatetic influence,⁶ but though we can assume that Cicero includes more material from Theophrastus than he formally acknowledges, it is normally prudent to discuss only those passages specifically cited from him. The problem can be illustrated from the so-called Theophrastus papyrus, *P.Hamb.* 128,⁷ published in 1954,

and obviously from the early Peripatos in view of the close links with Aristotle's *Poetics* 20–22 on types of words. But is it from Theophrastus' *On Style*, as Snell suggests? The most significant difference from Aristotle is in the treatment of metaphor, where *metaphora* is analogical metaphor, and a new term, *metousia*, covers nonanalogical types. The papyrus's restricted use of *metaphora* offers a useful modification of Aristotle to concentrate attention on the most interesting type—a focus that fits later rhetorical theory of metaphor. It is therefore attractive to ascribe to Theophrastus this adaptation of Aristotle. Yet if a major critic like Theophrastus is the author of the papyrus, it is perhaps suspicious that later theory fails to use the term *metousia*.⁸

Sheer lack of evidence makes it unprofitable to try to distinguish Theophrastus from other Peripatetics. Comparison of Aristotle and Theophrastus seems a more promising field, in view of the material available from Aristotle's *Rhetoric*. But widely differing assessments of their relationship have been made. The two are regularly linked, e.g., Cic., *De div.* 2.4 and Qu. 3.7.1 *Aristoteles atque eum secutus Theophrastus*, yet we are also told that Theophrastus often disagreed with Aristotle: Qu. 3.8.62 *dissentire ab eo non timide solet*. How close a follower was he? Was his contribution essentially the addition of details, as on prose rhythm, where he wrote *eisdem de rebus et accuratius* (Cic., *Orat.* 172), and the covering of areas neglected by Aristotle such as delivery, *hypokrisis*?⁹ Crucially, when he innovated, did he ever produce ideas of which Aristotle would have disapproved? For Grube, for example, "no un-Aristotelian theory or formula can fairly be traced to him,"¹⁰ while for others he is of central importance in transmuting Aristotle's ideas into what became later standard theory. Decision here will rest essentially on how we interpret Theophrastus' role in the development of the two most pervasive frameworks for later critical analysis, the theory of styles or *charakatêres* and the theory of qualities or virtues, *aretai*.¹¹ Did he, with Aristotle, see good prose as essentially unitary, consisting of a single ideal mean, or did he distinguish three approved styles—the grand, plain, and middle or mean? We know he listed four qualities of good style, *hellênismos*, clarity, propriety, and ornamentation (*ornatum illud suave et affluens* according to Cic. *Orat.* 79), but did he merely unpack Aristotle's single virtue of style, *lexeôs aretê*, or did he open the way for the later, longer lists of kinds of ornamentation with separate qualities such as grandeur and sweetness?

We may even doubt whether Theophrastus would be worth serious attention if his literary works had survived complete. After all, his main interest, like Aristotle's, lay in philosophy and science even, if he did write on style, rhetoric (several works), history, poetry, comedy, laughter, and delivery.¹² I begin then with a fragment which has fortunately survived to suggest a critic of perceptive sensitivity, a passage described by Grube as

"perhaps the most original fragment,"¹³ yet one which also paradoxically illustrates Theophrastus' closeness to Aristotle. It derives from an analysis of persuasiveness, *pithanotēs*:¹⁴

Not everything should be given lengthy treatment with full details but some points should be left for our hearer to grasp and infer for himself. If he infers what you have omitted, he no longer just listens to you but acts as your witness, one too who has been made more predisposed in your favor, since he feels he has been intelligent and you are the person who has given him the opportunity to exercise his intelligence.

No exact parallel exists, and since it is persuasiveness in narrative¹⁵ that Theophrastus is almost certainly analyzing, he may well be correcting Aristotle's approval of realistic details in narrative, *Rh.*1417b2: "For they are persuasive (*pithana*) since, accepted because they are what men know, they become tokens (*symbola*) to validate what they do not know." More important than any difference is the fact that both critics suggest a psychological explanation for the effect on the audience.¹⁶ Compare especially Aristotle's similar type of explanation for the impact of an emotional style in *Rh.*1408a19 and 32 ff.:

The appropriate style adds persuasiveness (*pithanoi*), for our mind falsely infers that the man is speaking the truth with genuine feeling, so that . . . the hearer is always similarly affected and sympathizes with the person who expresses emotion. . . . The audience is also affected by that only too favorite phrase of speech-writers, "Who does not know?" or "Everyone knows." For the hearer agrees, out of shame, so that he can join in with everyone else.

Theophrastus uses the same type of psychological explanation, in his case for a purely cognitive process—flattery of the intellect, not the emotions—and the result is similarly the desired audience reaction.

Theophrastus' explanation would also seem to be a particular application of a general principle in Aristotle, the pleasure of learning. So Aristotle recognizes the intellectual pleasure from *mimēsis* in *Po.*1448b8–17: "We infer what each thing is," and *Rh.*1371b4 ff.: "Learning is pleasant . . . and we feel pleasure in the inference that 'This is that,' with the result that we come to understand something." So, too, with diction and enthymemes, *Rh.*1410b20 ff.: "All those which give us quick understanding (*mathēsis*) are witty—not superficial inferences of the obvious, nor those wrapped in obscurity, but those we understand as soon as they are uttered, even if we were ignorant before, or those where our understanding follows only a moment later." In the case of the enthymeme this enjoyment can even come from anticipating the conclusion, *Rh.*1400b32 *proaisthanomenoi*. It is this

same pleasurable engagement of the intellect which underpins Theophrastus' explanation (because it is pleasurable the audience favors the speaker). The chain reaction is made clear by a passage of Quintilian on *adianoëta*, 8.2.21: *sed auditoribus etiam nonnullis grata sunt haec, quae cum intellexerunt acumine suo delectantur, et gaudent non quasi audierint sed quasi invenerint*. We may then infer that Aristotle would have approved Theophrastus' analysis of persuasiveness for its method, premises and conclusion—yet at the same time this is not to deny that Theophrastus comes across as a critic of shrewd discernment.

Interest in audience reaction is sharply seen in another fragment, namely, fr.24 S,¹⁷ where Ammonius records Theophrastus' distinction between audience-oriented and fact-oriented speech (*logos pros tous akroōmenous* and *logos pros ta pragmata*). The latter is illustrated by philosophy, primarily concerned with truth and methods of argument, the former by poetry and rhetoric, whose job (*ergon*) it is to have an ornamented style and so arouse a favorable audience reaction. This Theophrastean schema is presented formally with definition and subdivisions,¹⁸ but the obvious source for the two *logoi* is Aristotle (and, earlier, Gorgias and Plato).¹⁹ There is, however, the major difference that Theophrastus pragmatically accepts the audience-oriented speech, perhaps significantly listing it first,²⁰ whereas in the *Rhetoric* Aristotle makes only reluctant concessions to the audience, describing as additional (1354a13 ff.) anything which is not about the *pragma* but angled toward the juror, and only sadly allowing (1404a1 ff.) that one cannot in oratory, as in teaching geometry, restrict oneself to the *pragmata* and regard anything outside the proof as superfluous; there is a basic minimum necessity to communicate intelligibly, but all else in style is *pros ton akroatēn* (*ibid.* 9–12); since, therefore, it is not enough *mête lypein mête euphrainein* (1404a5) and there must be an impact on the audience, there must also be elaboration of style. Aristotle thus causally links audience orientation and stylistic ornamentation. This requirement of style in turn links rhetoric and poetry, since prose turns to the ornamentations of poetic diction (1404a25 ff.). Diction in prose and poetry are closely connected,²¹ and in his analysis of, e.g., metaphor Aristotle agrees with later theory in regarding the difference as one of degree, not kind: prose must be more unobtrusive and so more restrained in its use of ornamentation.

Theophrastus reflects Aristotle's ideas and vocabulary, rearranging to shift the emphasis more toward speech angled to an audience but retaining Aristotle's causal link between stylistic embellishment and the need for an impact on the audience. He also explicitly links poetry and prose, a link found elsewhere in his fragments. So in fr.1a S (D.H., C.V.16) he rejects petty, low vocabulary, "from which there will be no good *poiēma* or *logos*." In another well-known fragment, 20 S (Qu.10.1.27), he recommends the

reading of poetry by the aspiring orator: "Theophrastus says that it is of the greatest advantage for the orator to read poets, and many follow his lead" (note his influence again on later theory).²² We may conclude that the formulation and emphasis in Theophrastus' classification of the two *logoi* fit the mainstream of later theory, but that his originality is limited to a modification of Aristotle—though it is an important one that Aristotle would hardly approve—to eliminate the last traces of Plato's hostility to rhetoric and accept the legitimacy of affective, ornamented prose.

Any further discussion of fr.24 S is bedevilled by uncertainty how much is genuinely from Theophrastus, and how much is a gloss and amplification by our source, Ammonius.²³ But the link between affective impact and stylistic ornamentation seems secure and gives some support for an interpretation of the disputed *ornatum illud suave et affluens* (Cic., *Orat.* 79) in Theophrastus' theory of virtues of style as prose which has a pleasurable impact and stylistic ornamentation—the two inseparable sides of the *same* coin, or, to use a phrase in Philodemus (*Po.* 5, col. 28 Jensen), it is style *tēi kataskeuēi tas akoas terpousan*.²⁴

In what follows I hope to prove this interpretation. First, the theory of *aretai* derives from Aristotle, whose concept of good prose is a logical and coherent amplification of ideas we have already met. First, he recognizes only one single *lexeōs aretē* (*Rh.* 1404b1 and 37, 1414a22). Second, this virtue is not clarity, as is often supposed,²⁵ but an interdependent package of three items—clarity, propriety, and ornamentation. Clarity is primary, since all speech must communicate meaning, but in audience-oriented prose the style must also be "neither low nor excessive but appropriate" (1404b4). This ornamentation is described by several terms that we find also in later theorists, thus *kekosmēmenon*, *exallaxai*, *semnos*, *xenos* (1404b7–11). Third, as a result of this ornamentation, prose will be pleasant, *hēdu* (1404b12). Clearly, this use of "pleasant" denotes not a specific quality or tone of style which can be distinguished from, e.g., grandeur but any and every pleasurable impact. Stylistic embellishment and pleasurable impact are similarly linked in the case of metaphor (1405a8 "it has clarity and *to hēdu kai to xenikon*,")²⁶ while prose rhythm, similarly, should have *semnotēs* and make a strong impact, *ektēsai* (1408b35).²⁷ I would also argue that *hēdu* has the same meaning in *Rh.* 1414a18 ff., where Aristotle refutes the suggestion that style should be further subdivided as pleasant and dignified.²⁸ The refutation is in two parts. (1) "If so, why not add other moral virtues?" This objection answers only the suggestion of "dignified," not "pleasant," since pleasure is not a moral virtue—and if it were, the refutation would be incomplete and unbalanced, both items answered in the first part, only the second in the second part. (2) "It is also unnecessary to add 'pleasant,' since that is already effected by the items already mentioned. For why else should style be clear,

not low, but appropriate?" In other words, *hēdu* again describes the pleasurable impact necessarily resulting from prose which has the right mixture of ornamentation.²⁹ Consistently, therefore, Aristotle presents a single virtue of style, a blend of clarity, propriety, and ornamentation, the resulting impact being *hēdu*. The three necessary ingredients are given independent analysis in Rh.3.5 to *hellēnizein*, including rules for clarity—3.6 pomp of style (*ongkos*) and 3.7 the appropriate.

These are the immediate source and basic ingredients for Theophrastus' theory of four qualities, a theory attested by Cicero in *Orat.* 79 (fr.12 S). Here Cicero is describing the plain style:

The language will be correct and good Latin; it will be expressed clearly and lucidly; we will take heed to be appropriate; but one thing will be absent, what Theophrastus lists fourth in his virtues of style, ornamentation which is pleasant and (?) abundant, *ornatum illud suave et affluens*.

Theophrastus lists not a single virtue but four—correctness or *hellēnismos*, clarity, appropriateness, and ornamentation. He has taken Aristotle's three constituent elements and subdivided clarity into correct speech and clarity, a useful recognition of grammar as a separate subject.³⁰ These differences between Aristotle and Theophrastus are insignificant if Theophrastus is giving an exclusive list, so that all four are always required everywhere in good prose. That this is indeed the case is generally agreed³¹ and proved by later use of the theory of virtues. Thus the Stoics listed five virtues, adding brevity to what are clearly the Theophrastean four: "There are five *aretai logou*: *hellēnismos*, clarity, brevity, appropriateness, and *kataskeuē* or ornamentation" (Diogenes Laertius 7.59). The Stoics accepted the need for some ornamentation, as Stroux 35–7 argues, but it is described in distinctly negative terms as "style which has escaped the level of ordinary expression, *idiōtismos*" (Diogenes Laertius, 7.59), a definition more in the spirit of Aristotle than Theophrastus. The four Theophrastean virtues are also the basis for Cicero's analysis in *De oratore* 3.37 ff., on how we may speak *Latine* . . . *plane* . . . *ornate* . . . *apte congruenterque*.³² Cicero does not name Theophrastus, but he is the obvious source.

In Cicero only the first two qualities, Latinity (= Greek *hellēnismos*) and clarity, are necessary (*De or.* 3.38 *usum necessarium*), the third and fourth are additional. This distinction of necessary and unnecessary qualities is familiar in later theory (e.g., D.H., *Ad Pomp.* 3, p.239.15–16 U-R), but alien to Theophrastus. Its appearance later than Theophrastus is indeed strongly suggested by the variable and ambiguous position of propriety, sometimes classified with the necessary qualities, sometimes with the additional ones;³³ in truth it was originally the guide for determining the balance between

clarity and ornamentation and so has a logical foothold in both classes. But, although the distinction of necessary and unnecessary qualities is not Theophrastean, it roughly marks the distinction between nonaffective and affective prose, a distinction he did recognize. Thus, in Cicero's *Orator* the plain-style orator has only the necessary qualities and lacks *ornatum*, since his purpose is nonaffective—not to delight or move the audience but simply to instruct or argue (*Orat.* 20 *omnia docentes*, 69 *subtile in probando*), and in *De or.* 3.91 it is only the second pair of qualities, ornamentation and propriety, which has an affective force: *hanc habent vim ut sit quam maxime iucunda, quam maxime in sensus eorum qui audiunt influat et quam plurimis sit rebus instructa*.³⁴ For Cicero therefore all four Theophrastean qualities were necessary for affective, audience-oriented prose, a position we can also ascribe to Theophrastus.

But controversy on Theophrastus' theory of qualities centers around the interpretation of the fourth, what Cicero terms *ornatum illud suave et affluens*. Do the two subdivisions, *suave et affluens*, add up to a single concept? If they are distinct, are they coextensive and compatible or opposed and incompatible? If we turn to the later theory of qualities, we find in Dionysius a long list of possible virtues of style, some or all of which an author can have but not all of them simultaneously in the same passage. The list has first the necessary qualities, then the additional or *epithetoi kosmoi*, among which we find three different groups consisting of (1) grandeur, (2) forcefulness and (3) sweetness or charm (see, e.g., *Lys.* 13, *Th.* 22, *Ad Pomp.* 3).³⁵ Lysias, for example, has charm but lacks grandeur and force, whereas Thucydides has grandeur and force but lacks charm. Dionysius did not invent the theory (in *Th.* 22 he refers to detailed earlier treatment), and there are some traces of the three groups in Cicero (see *De or.* 3.82, *Brut.* 44). There is then a temptation to assume Theophrastus already posited similar subdivisions and to identify *suave et affluens* as two contrasting qualities of sweetness and grandeur, *hēdu kai megaloprepes*.³⁶

This is very unlikely. First, we might expect some form of disjunctive expression, *aut suave aut affluens*.³⁷ Second, there is the vocabulary, with the curious choice of *affluens*. *Ornatum* probably renders *kataskeuē*,³⁸ *suave* will be *hēdu* and *affluens* almost certainly *peritton*; compare the translation of *perittos* in Aulus Gellius 1.22.9: "either what is superfluous and not necessary or what is *abundans nimis et affluens et exuberans*." For *perittos* used by Theophrastus compare also fr.5 S = D.H., *Isoc.* 3: *to mega kai semmon kai peritton en lexei*. *Affluens* is a rather vague term, nontechnical and explicable as a choice by Cicero only as an attempt to translate *perittos* and not in itself readily suggesting grandeur as distinct from sweetness. But *perittos* itself raises difficulties; it is regularly used of style,³⁹ as *affluens* is not, but it has a wide range of meaning, indicating all that is above the

ordinary and shading easily into a synonym for grandeur, especially in contexts which involve a contrast between the grand and plain styles, e.g., Demetr.77 and D.H., *Dem.*1, p.130.1–3 Ὑ-R *exēllagmenē kai perittē kai enkataskenos kai tois epithetois kosmois hapasi sympeplērōmenē lexis*. In Aristotle, terms which later describe a grand style are used more widely of the ornamented style generally (e.g., *Rh.*1404b8 *to gar exallaxai poiei phainesthai semnoteran*), and the same seems true of Theophrastus.⁴⁰ So in fr.6 S = Demetr.41 an example of *megaloprepeia* is the roughly paeonic rhythm in the clause *tōn men peri ta mēdenos axia philosophountōn*; there is ornamentation here from the rhythm (i.e., something extra), but hardly grandeur. Again, Theophrastus defines *kala onomata*⁴¹ very generally: in fr.1a S = D.H., C.V.16 *kala onomata* are contrasted with *mikra kai tapeina* and make our style *kalēn . . . kai megaloprepē*, while in fr.1b S = Demetr.173 Theophrastus is said to have defined beauty in a word as “what is attractive, *hēdu*, to the ear or eye or has inherent nobility from its meaning.” Note, too, that *hēdu* refers here to impact on an audience.⁴² If in fact we conflate Dionysius and Demetrius, *kala onomata* have (1) ornamentation (Dionysius) and (2) successful impact on an audience (Demetrius)—Does this reflect the duality of *suave et affluens*?

Third, Cicero himself makes no use of a contrast of sweetness and grandeur of style in his analysis of the fourth Theophrastean virtue, *ornate dicere*, in *De or.*3.91 ff. Instead, he begins with an analysis of the proper kind of impact, *quod maxime teneat eos qui audiant* (*De or.*97), concluding (*De or.*103) *ita sit nobis igitur ornatus et suavis orator*. Here *suavis* refers to the rousing of the right feeling of pleasure in the audience from speech which is not cloying but moving.⁴³ Cicero then proceeds to other topics, focusing on the need for a well-stocked mind and wide general culture. This section is his own original contribution, and is marked as a digression in 144 ff., where, after acclaim by the other speakers in the dialogue, Crassus is persuaded to return *ad ipsius orationis laudem splendoremque* (147); Crassus describes these as *pervolgatas res* (148) but proceeds to offer an analysis of style, logically ordered under diction, e.g., metaphor, and word order. This would seem the obvious equivalent point where Theophrastus similarly analyzed ornamented style, *to mega kai semnon kai peritton en lexei*, under diction, word order, and figures (fr.5 S = D.H., *Isoc.*3).

Cicero's analysis of *ornate dicere* may then be summarized thus: (1) 97–103: emotive impact, *suavitas* = *to hēdu*; (2) 104–47: Cicero's addition; (3) 148–210: *ornate dicere* in diction etc. = *to peritton*. We can then equate Theophrastus' *suave et affluens* with (1) and (3) respectively. There is also the possible consequence that Theophrastus similarly analyzed *to hēdu* separately, in the sense of audience impact.⁴⁴ Alternatively he analyzed only one heading, ornamentation of style which has a pleasant impact (one might

think of, e.g., *kala onomata*). On either view he did not recognize two distinct qualities of style, sweetness, and grandeur. The term *suavitas* = *to hēdu* covers all ornamented style, designating good affective or audience-oriented speech.

Such a general meaning of *suavitas* has parallels elsewhere; for example, in Cic., *Part.or.* 31 on the requirements for good narrative. Cicero is discussing content, not style, but the framework recalls the theory of qualities of style: *nam ut dilucide probabiliterque narremus, necessarium est, sed assumimus etiam suavitatem*. Here *suavitas* embraces all that is extra, added *ad ornandum*, and it has a place equivalent to that of ornamentation in style (cf. *Qu.8.3.61 ornatum est quod perspicuo ac probabili plus est*). It is produced by content which has a strong emotive impact: "surprise, suspense, unexpected outcomes, with a range of human emotions, dialogues between people and displays of grief, anger, fear, joy, desire" (*Part.or.* 32). In *Part.or.* 72–73 such emotional content is linked to richness of style in an analysis of the panegyric, a type of speech which aims to give the audience pleasure, *voluptas*: It will accordingly use (1) an adorned style with such words as have the most *suavitas* (metaphor, etc.) and harmonious sentence patterns designed to satisfy the ear, and (2) *illa ornamenta rerum*, since suspense, surprise, and the like all give pleasure. Ornamentation and *suavitas* are coextensive.

We may compare *Ad Herennium*, also of the first century B.C. The author uses the single heading of *dignitas* to cover all ornamented prose. So in 4.16 the grand, the plain, and the middle style all have *dignitas* from *exornationes*; in 4.17 good style has correct speech, clarity, good word arrangement and *dignitas*; in 4.18 *dignitas* produces *ornatam orationem*, from the use of figures, a long list of which he then analyzes. In the recapitulation at the end, in 4.69, he states that the use of figures will give *et gravitatem et dignitatem et suavitatem*, and if we follow his guidance we will speak *ornate et suaviter*. How does *suavitas* relate to *dignitas*? The author can elsewhere distinguish sweetness of style from grandeur of style, and *dignitas* can on occasion have this narrower meaning of grandeur (see 4.32 and 67), but the term used for sweetness in such contrasts with grandeur is not *suavitas* but *venustas*, *festivitas*, or *lepos* (see 4.19, 32, 45, and 67). In 4.69 he is also recapitulating, so that it is likely that *dignitas* has the same wide application as in the introduction, in 4.18. Thus *suavitas* is most probably coextensive with *dignitas*, indicating the pleasure we feel from hearing artistically ornamented prose.

To return to Theophrastus, then, there is a strong case for interpreting his fourth quality, *ornatum illud suave et affluens*, as affective, ornamented style. If so, the later theory of qualities, with its recognition of separate virtues of sweetness, grandeur and force, introduces divisions alien to Theophrastus, who offers an interlocking, interdependent group of four

qualities, all of which are required for good style and which as a group add up to the single *lexeōs aretē* of Aristotle. Theophrastus' modifications of Aristotle are minor, for example in vocabulary, but it is interesting that he gives *to hēdu* a more explicit place. This change may well reflect Theophrastus' greater interest in audience-oriented prose, but the basic blueprint for his theory of four qualities derives from Aristotle.

Discussion of Theophrastus' originality and relationship to Aristotle would not be complete without some consideration of that other vexed question, Theophrastus' place in the development of the theory of styles or *charaktēres* and his possible introduction of the theory of three styles, which classified and analyzed authors and passages under the grand, plain, and middle styles.⁴⁵ This theory was widely current by the first century B.C., as in *Ad Herennium* 4.11–16 and Cic., *Orat.* 20 ff., and we know from Aulus Gellius 6.14 that Varro applied it to poetry. Did Theophrastus allow three such valid styles or did he, in proper Aristotelian fashion, recognize one ideal mean?

Two fragments are relevant, and both suggest a mean. (1) In fr.4 S = D.H., *Dem.* 3, p.132.3 ff. U-R Theophrastus recognizes a third type of diction, first introduced by Thrasyarchus and *miktē te kai synthetos* from the two other kinds, the grandiose Thucydidean and the plain, unadorned Lysianic. Dionysius' language suggests a Peripatetic mean, since he says of Thrasyarchus "if he really was *pēgē tis tēs mesotētos*," and describes the third type as *mesē tōn duein kai eukratos* and, in *Dem.* 15, p.161.23 ff. U-R, as *memigmenos* from the other two and avoiding *tas hyperbolas* of both. (2) In fr.7 S = *Demetr.* 114 we have a definition of Theophrastus, "frigidity is what goes beyond the appropriate expression," *psychron esti to hyperballon tēn oikeian apangelian*. This definition allows only one excess fault of style, contrary to the context in Demetrius, for whom *to psychron* is the neighboring excess fault of one specific style, the grand style—a mismatch which is convincing proof that we have the genuine words of Theophrastus.

This Theophrasteian definition of *psychros* is readily derived from Aristotle, who saw good style, *aretē lexeōs*, as a mean, *mēte tapeinēn mēte hyper to axiōma alla preposan* (*Rh.* 1404b3–4), and in *Rh.* 1405b34 ff. analyzed under the term *psychros* the faulty extreme in diction, where the style is overpoetical and fails to meet *ton metron* (*Rh.* 1406a16). It is also easy to take Aristotle's theory of ethical triads, where *aretē* is a mean between neighboring *hyperbolē* and contrasting *elleipsis*, and apply it to style,⁴⁶ and it is this step which Theophrastus may well have taken. (1) *to psychron* is a fault of excess, *hyperbolē* (note *hyperballon* in the definition). (2) The surrounding context in Demetrius suggests a link with ethical theory, with analogies drawn from moral vocabulary, e.g., rashness neighbors upon bravery; note also the comparison with the braggart, *ho alazon*, in *Demetr.* 119. (3) In the extant fragments

Theophrastus recognizes only one fault, of excess, and nowhere explicitly notes the opposite fault of lowness, Aristotle's *tapeinēn*. But it is implicit in his theory of qualities that style lacking *ornatum illud* will be faulty (namely, low?), and in fr.1a S = D.H., C.V.16 he advises using *kala onomata* and avoiding *mikra kai tapeina*. More speculatively, his opposite fault of lowness may be lurking in the definition of aridity in Demetr.237: "when a writer expresses an important subject in trivial words," *pragma mega smikrois onomasin apangelēi*; note the verb, and compare *apangelian* in Theophrastus' definition of *to psychron*—these are the only occurrences of verb and noun in Demetrius.⁴⁷ We may conclude, therefore, that Theophrastus, like Aristotle, saw good prose as a mean lying between excess (*to psychron*) and deficiency, which he probably called *to mikron* or *tapeinon*. The mean covers all good style, in other words all speech that has a combination of all the four qualities. The mean, therefore, has *ornatum illud suave et affluens* and *to mega kai semnon kai peritton en lexei*. For Theophrastus this is the ornamented style generally, but in later writers who recognize a specifically grand style there is a natural confusion. Hence Demetrius' grand style contains traces of the wider use of *mega* in Theophrastus (see above and note 40) and *to psychron* becomes excessive grandeur or bombast.

In Aristotle the demands of propriety entail flexibility of style, so *Rh.*1404b16–17 *episystellomenon kai auxanomenon to prepon*, and *Rh.*1413b3 ff., where different styles suit different types of speech, for example *lexis graphikē* and *lexis agōnistikē*, the former for prose to be read, the latter for prose to be delivered. Within the three branches of oratory the *akribeia* of the written style suits epideictic best, it will appear less in forensic and least in deliberative. Style, then, will vary in keeping with the content, "so that one will not speak carelessly about matters requiring pomp nor *semnōs* about paltry matters" (*Rh.*1408a10 ff.). We might note that this last sentence is formulated in a way that might allow the development of a two-style theory, the grand and the plain, chosen according to the appropriate content, a view already prevalent before Aristotle, as we see for example in Aristophanes' *Frogs* 1058–59 *anangkē megalōn gnōmōn kai dianoioōn isa kai ta rhēmata tiktein*.⁴⁸

Theophrastus' recognition of propriety within his theory of qualities similarly allows for flexibility of style, and he follows Aristotle in warning against elaboration of style in deliberative oratory (fr.23 S = Qu.3.8.62). The mean style need not be monolithic but will vary according to context. It is thus theoretically conceivable that Theophrastus took up Aristotle's hint of a two-style theory and modified it to include a third, intermediate type. If so, all three styles would be valid, chosen according to the appropriate, and the gamut of styles would run *psychron* (bad), grand, middle, plain (all good), low (bad). He then becomes the originator of the three-style theory

as found in *Ad Herennium* and in Cicero,⁴⁹ where the middle style is not the ideal mean. But such a schema is nowhere to be found and seems implausible. A further argument against recognition of three valid styles by Theophrastus is the silence of Demetrius, who defends his choice of four styles against advocates of two styles, ignoring the possibility of a three-style theory (Demetr.36–7).

But there is no compelling reason to attribute such a three-style theory to Theophrastus. As we have seen, his recognition of a third type of diction in fr.4 S = D.H., *Dem.*3 fits better the notion of a mean, *mesotēs*, a view intrinsically more likely in a Peripatetic like Theophrastus. That this third type of diction is a mean is also suggested by the choice of Thrasyarchus as its discoverer. If Thrasyarchus is the first to use the mean in diction, he plays the role he played for Aristotle in prose rhythm, where he was the first to use the paean, a mean between the dactylic and iambic rhythms. Theophrastus follows Aristotle in his theory of meter and the primacy of the paean,⁵⁰ presumably accepting Thrasyarchus as the inventor since this is current theory later (cf. Qu.9.4.87 *inventum a Thrasyarcho*). Thrasyarchus in fact emerges as a key figure for Theophrastus in the development of good prose style—the first to use the mean in diction and in rhythm, the first also to use terseness of expression, *systrophē* (fr.3 S = D.H., *Lys.*6, p.14.1 ff. U-R). Interpretation of this last discovery is disputed,⁵¹ but it is clearly an aspect of sentence structure—Is it the mean between the unshaped and the overperiodic sentence? In any case, if Theophrastus recognizes a mean in diction and rhythm, it becomes irresistible to look for traces of a similar theory in respect of sentence structure. Aristotle recognizes only the periodic and the unformed (*Rh.*3.9), i.e., the mean and the *elleipsis*, but Theophrastus knows of a fault of excess, in fr.2 S = D.H., *Lys.*14, p.23.16 ff. U-R, where he attacks those—even Lysias—who use excessive antithesis and assonance, the result being like a poem and unemotive.⁵² To posit a theory of a mean in sentence structure is attractive, and if Theophrastus himself did not originate it, some early Peripatetic did, as we see in Demetr.12–5, where Demetrius presents a historical development of sentence structure from (1) the unformed archaic to (2) the overperiodic, an excess compared to poetry and illustrated by Isocrates, Gorgias, and Alcidas,⁵³ to (3) the ideal blend, *memichthai mallon di' amphoterōn*. He includes a comparison from sculpture in 14 which may suggest Theophrastus himself,⁵⁴ and the whole history closely parallels that of diction in Aristotle, with movement from the early to the overelaborate poetic and Gorgianic *psychron* to the ideal blend. Theophrastus is not named in Demetr.12–5 but may well be the source.

Cumulatively a consistent picture emerges that Theophrastus advocated the mean, both in style generally (a mean achieved by the combination of

the four qualities) and in the subdivisions of diction, rhythm, and probably sentence structure. Aristotle would have approved.

ABBREVIATIONS

The following abbreviations are used throughout the paper. (Other references are given in full):

Grube (1) = G.M.A. Grube, *Theophrastus as a Literary Critic*, *Transactions of the American Philological Association* 83 (1952) 172-83.

Grube (2) = G.M.A. Grube, *The Greek and Roman Critics* (Toronto 1965).

Hendrickson = G.L. Hendrickson, "The Peripatetic Mean of Style and the Three Stylistic Characters," *American Journal of Philology* 25 (1904) 125-46.

Kennedy (1) = G.A. Kennedy, "Theophrastus and Stylistic Distinctions," *Harvard Studies in Classical Philology* 62 (1957) 93-104.

Kennedy (2) = G.A. Kennedy, *The Art of Persuasion in Greece* (Princeton 1963) 278-82.

Lossau = M. Lossau, *Untersuchungen zur antiken Demosthenesexegese, Palingenesia* II (1964) 36-52.

Schenkeveld = D.M. Schenkeveld, *Studies in Demetrius on Style* (Amsterdam 1964).

Stroux = J. Stroux, *De Theophrasti virtutibus dicendi* (Leipzig 1912).

Most of the fragments discussed are from Theophrastus, *On Style* (*Peri lexeōs*). The edition of A. Mayer (Teubner 1910) is highly uncritical and includes a mass of material not probably Theophrastean. Basic still is M. Schmidt, *Commentatio de Theophrasto rhetore* (Halle 1839), whose fragment numbers I follow (for a concordance see Mayer, pp. 226-27). The fragments actually discussed within this paper are:

fr.1a S = D.H., *C.V*16, p.66.11ff. U-R;

fr.1b S = Demetr.173;

fr.2 S = D.H., *Lys*.14;

fr.3 S = D.H., *Lys*.6;

fr.4 S = D.H., *Dem*.3;

fr.5 S = D.H., *Isoc*.3;

fr.6 S = Demetr.41;

fr.7 S = Demetr.114;

fr.8 S = Demetr.222;

fr.12 S = Cic., *Orat*.79

fr.20 S = Qu.10.1.27

fr.21 S = Cic., *Orat*.39

fr.23 S = Qu.3.8.62

fr.24 S = Ammonius, *CIAG* vol.4.5, p.65.31ff;

p.38 S = Simplicius, *CIAG* vol.8, p.10.24ff.

NOTES

This is a revised version of the paper given at the Theophrastus conference, Liverpool 1983. For helpful comments I owe thanks to Michael Winterbottom and the participants of the conference, especially Stephen Usher.

1. Diogenes Laertius 5.38; cf. Cic., *Orat.* 62; Qu. 10.1.83.
2. Cf. Cic., *Orat.* 127, *Brut.* 119–21.
3. Demetr. 181–82.
4. Cf. *Orat.* 92 and 94, *De Off.* 1.3 *dulcis orator*. On Demetrius of Phaleron see K. Heldmann, *Antike Theorien über Entwicklung und Verfall der Redekunst, Zetemata* 77 (Munich 1982) 98 ff.
5. See Dem. Ph., fr. 156–73; Dicae. fr. 42; Heracl. Pont. fr. 33; Hieron., fr. 50–52; Prax. fr. 8–23 Wehrli. For evidence of an inbred continuing school tradition within the Peripatos note the similarity of Dem. Ph., fr. 169 and Hieron., fr. 52 Wehrli, and the reuse of an example in Arist., *Rh.* 1409b10 for a different point in Prax., fr. 13 Wehrli, repeated in Demetr. 58.
6. See Stroux, especially 54 ff., and note *De or.* 1.43, 3.182, and 187. We may also trace strong Peripatetic influence in Demetrius, *On Style* (though the overall framework of his four styles is not Theophrastean); see F. Solmsen, “Demetrios Periermēneias und sein Peripatetisches Quellenmaterial,” *Hermes* 66 (1931) 241–67; and on sentence-theory see R.L. Fowler, “Aristotle on the Period,” *Classical Quarterly* 32 (1982) 89–99. See also my unpublished Oxford Ph.D. diss., “Introduction and Commentary on the Periermēneias” (1967) 66 ff. and 103 ff.
7. B. Snell, ed. *Griechische Papyri der Hamburger Staats- und Universitätsbibliothek* (1954).
8. The adverb *metousiastikōs* is used in *Rhetores Graeci* 3.208 Spengel, to describe the extended use of *pyxis* to cover not just a box made of boxwood but also a box made of some other material.
9. Diogenes Laertius 5.48. Cf. Arista., *Rh.* 1403b21–2: “Thirdly, what has the greatest (*megistēn*) force, but has not yet been attempted, the theory of delivery.” For *megistēn* note Athanasius, *Prolegomena in Hermogenis De Statibus*, p. 177.3ff. Rabe: “Theophrastus says that for persuasion delivery is the orator’s greatest tool, *megiston*.” (Accept Rabe’s conjecture *rhētori* for the transmitted *rhētorikēi*.) For more on delivery see W. Fortenbaugh, “Theophrastus on Delivery,” chapter 13 in this volume.
10. Grube (1) 172; cf. Grube (2) 103 ff.
11. For a more generous estimate of Theophrastus’ originality see, e.g., Kennedy (1) and (2). Discussion has largely centered on the two theories of styles and qualities, but see Lossau for argument that Theophrastus gave greater recognition than Aristotle to the forensic style.
12. Diogenes Laertius 5.42–50.
13. Grube (1) 175.
14. Fr. 8 S = Demetr. 222.
15. Demetrius is analyzing the plain style, advocating persuasiveness and vividness and focusing on narrative. For the traditional virtues of good narrative, including persuasiveness, see Stroux, pp. 43 ff. and C. Brink on Hor., *A.P.* 140 ff. Critics other than Aristotle and his followers also demanded brevity, as already had Isocrates (see, e.g., Qu. 4.2.31), but for Aristotle, as one might expect, narrative should be neither long nor short but expressed *metriōs* (*Rh.* 1416b35). Theophrastus does not contradict Aristotle, since he is not attacking *makrēgorein* as such but analyzing a specific occasion for brevity by omission.
16. For psychological explanations in Theophrastus, cf. Plut., *Quaet. conviv.* 631E on the use of jest as oblique reprimand: “Thus the listener of his own accord adds what is missing, as if *eidōs kai pisteuōn*.” Compare his theory of delivery (see

above note 9) and music (Plut., *Quest. conv.*623A). So with audience-oriented speech failure in impact means total failure (cf. fr.2. S) and Theophrastus sought to explain why.

17. See Lossau 47 ff., Grube (1) 178. Given that Ammonius is our source, the fragment is unlikely to derive from the *Peri lexeōs*. Perhaps it was from the preamble to a work on logic.
18. For formal definitions in Theophrastus cf. fr.1 *S kala onomata* and fr.7 *S to psychron*. For subdivisions, double or triple, cf. fr.1, 2, 4, 5, and, a foursome, 12 S. So, too, he knew six types of amplification (*Rhetores Graeci* 1.215 Spengel-Hammer).
19. For poetry and prose as arousers of emotion cf. Gorg., *Hel.*8 ff., Plato, e.g., *Phdr.*271d. Gorgias's own style approximated prose to poetry (Arist., *Rh.*1404a25 ff.).
20. Contrast the reverse order in Arist., *Po.*1456a37 ff.
21. Cf. Note 19 above.
22. See H. North, "The Use of Poetry in the Training of the Ancient Orator," *Traditio* 8 (1952) 1–33.
23. The term *idea*, for example, is certainly later, and probably the whole of that part of the fragment is giving later theory. See Stroux 24 ff. on a similar problem in a citation from Simplicius, p.38 S.
24. On Philodemus see R.N. Gaines, "Qualities of Rhetorical Expression in Philodemus," *Transactions of the American Philological Association* 112 (1982) 71–81.
25. Single virtue of clarity: so Stroux; Grube; Kennedy; also S.F. Bonner, *Dionysius of Halicarnassus* (Cambridge 1939) 15; A.E. Douglas, edition of Cicero's *Brutus* xxxi. Conversely, plural virtues: so F. Solmsen, *American Journal of Philology* 62 (1941) 43; and D.A. Russell, *Criticism in Antiquity* 135. For the true picture see Hendrickson 129, aptly citing Arist., *Po.*1458a17 *lexeōs de aretē saphē kai mē tapeinēn einai* (the excellence of style is to be clear and not mean).
26. In *Rh.*1404b36, in a similar list, *to hēdu* is replaced by *lanthanein* (unobtrusiveness); both refer to the reaction of or impact on the audience. Stroux 33 links *to hēdu* always with clarity—and rightly so—but it results from the whole package, of which clarity is one part. I have conversely emphasized the link with ornamentation, but clarity is of course also essential.
27. *ekstasis* is a particular form of *to hēdu* in which the audience is affected strongly.
28. He has Theodectes in mind; cf. Qu.4.2.63 (on narrative) *Theodectes non magnificam modo vult esse verum etiam iucundam*. Aristotle's refutation suggests Theodectes similarly referred to pleasurable impact, not to a contrast of grand and pleasant styles.
29. Aristotle here considers only diction. In *Rh.*1414a27 he adds rhythm; for the pleasure given by rhythm see *Rh.*1408b27, 1409a31.
30. Theophrastus may also have demanded discriminating selection of vocabulary, an aspect of style which became increasingly important with the growth of *attikismos*. This later idea of atticism seems to have prompted the anecdote that Theophrastus himself spoke *nimis Attice* (Qu.8.1.2, cf. Cic., *Brut.*172; see Stroux 13–15).
31. See, e.g., Schenkeveld 76.
32. On the differing order of the last two items—propriety and ornamentation—in Cic., *De or.*3.37 ff. and *Orat.*79 see the opposing arguments of Stroux 60 ff., and Kennedy (1) 104, n.14. *Quartum* of ornamentation in *Orat.*79 is good evidence that *Orat.*79 is the more reliable.

33. See Stroux 79; Schenkeveld 74.
34. The last phrase, "supplied with as many things as possible," refers to content, not style, looking forward to Cicero's discussion in 104-47 of the need for a well-stocked mind; but the notion of the need for "extra" material may have been stimulated by a parallel demand for something "extra," *perittos*, in style.
35. See, e.g., Stroux 77-8; S.F. Bonner (above, note 25) 19; Schenkeveld 74. Further evidence of a list of qualities in the first century B.C. may be seen in Philodemus, especially *Po.V*, col.29 Jensen: "lucidly . . . and sometimes also fittingly and *kompōs kai pollais allais idiotēsi pepoikilmenōs*" (cf. col.27 and note 25 above), and Cic. *Part.or.*19 *haec quinque quasi lumina, dilucidum, breve, probabile, illustre, suave*.
36. So Stroux 28.
37. A point made independently to me by Michael Winterbottom and Stephen Usher.
38. Note Cicero's almost immediately following phrase, *oratoriae quasi supellectilis*, where *supellectilis* clearly translates a *skeu-* word. Alternatively Theophrastus used *kosmos* or *to kekosmēmenon* (e.g., Schenkeveld 73) and Cicero adds the current later term, which will then have been introduced by the Stoics.
39. See P. Geigenmueller, *Quaestiones Dionysianae de vocabulis artis criticae* (Leipzig 1908) 100-101. Its implications of "extra" may have added impetus to the later vocabulary of "extra" or "additional" virtues.
40. See Grube, *American Journal of Philology* 73 (1952) 251 ff.; also Grube (1) 179, n.27.
41. This fragment well illustrates Theophrastus' close debt to Aristotle, see *Rh.*1405b18-19.
42. Normally Demetrius opposes sweetness and grandeur, but the wider use of *hēdu* (*hēdus*, *hēdonē*) appears in two other passages showing Peripatetic influence: in 15 (a passage discussed at the end of this paper) and in 78 (cf. Arist. *Rh.*1405a8).
43. On the importance of pleasing the audience for Cicero, see Michael Winterbottom, "Cicero and the Silver Age," *Éloquence et Rhétorique chez Cicéron* (Entretiens Hardt 1982), esp. 262-66.
44. It may be significant that Cicero advocates a mean avoiding excess, a theory suggesting the Peripatos (cf. Hendrickson 144, n.1).
45. See bibliography in Kennedy (2) 278, n.25. Add Schenkeveld 66 ff. and S.F. Bonner, "Dionysius of Halicarnassus and the Peripatetic Mean of Style," *Classical Philology* 33 (1938) 257-66.
46. On the theory of faulty neighboring styles see A.E. Douglas, *Eranos* 55 (1957) 18-26.
47. See Stroux 107. In Aristotle *psychros* refers only to diction, and this may well be the case in Theophrastus. There is no reference to word order in Demetr.114 (and note *mikrois onomasin* in Demetr.237, if I am right in suspecting Theophrastus is the source there). Compare fr.4 S where the approved third type is a type of diction, not style generally including word order.
48. Compare also the contrast drawn between plain and sophistic poetic prose in Pl., *Prot.*338a; Isoc., *Paneg.*11; and *Antid.*46-7.
49. The three-style theory is briefly mentioned in Cic. *De or.*3.212, within a discussion of propriety. We have seen that Cicero is here using the framework of the four Theophrastean qualities, but though the framework is Theophrastean, the detailed analysis includes Cicero's own contributions, and he may well have introduced the reference here to the three-style theory in recognition of its popularity in his own day.

50. On the primacy of the paean see Arist., *Rh.* 1408b32 ff.; Demetr. 41; Cic., *Orat.* 192-4; Qu. 9.4.87. The later focus on style rather than Aristotle's mathematical proportions may derive from Theophrastus.
51. See Grube, *American Journal of Philology* 73 (1952) 251-66. For interest by Theophrastus in literary history and the development of prose style compare fr. 21 S = Cic., *Orat.* 39: it was with Herodotus and Thucydides that history first began *uberius . . . et ornatus dicere*.
52. Note the points shared by this fragment and Demetr. 12-15 discussed below; both link excess with the poetic and both speak of ornamentation and consequent emotional impact. For Theophrastus the ornamentation is excessive, leading to rejection by the audience, in Demetrius there is a good blend of the simple and the ornamented, with resulting pleasure. Both passages fit my interpretation of *ornatum illud suave et affluens*. Note also that both reject the style of Isocrates, Demetrius explicitly, Theophrastus surely implicitly by the description of the excessively balanced style (cf. Lossau 51-52). Theophrastus is then the source of the later Peripatetic view of Isocrates found in Dem. Ph., fr. 169 and Hieron., fr. 52 Wehrli. Aristotle by contrast approved the style (*Rh.* 1409b32 ff.), but he also found it successfully emotive (*Rh.* 1408b13 ff.)—taste changed, as it had previously changed over Gorgias; the Isocratean style no longer fulfilled the criterion of pleasurable impact and so became a faulty excess. Note that Isocrates appears under the approved middle type of diction in D.H., *Dem.* 3: it is his sentence structure, not his diction, which is an excess. Here again we may have an indication that Theophrastus discussed diction and sentence structure separately, not as two aspects contributing to a single style or *charaktēr*.
53. Mention of Alcidas is especially striking. He is very rarely cited but together with Gorgias illustrates *to psychron* in Arist., *Rh.* 1406a1 ff. and, in a close echo of Aristotle, Demetr. 116. Even in terms of examples the development of sentence structure in Demetr. 12-15 seems modeled on that of diction in Aristotle.
54. Cf. D.H., *Isoc.* 3, p. 59.19 ff. U-R, for a similar comparison, argued to be from Theophrastus by Kennedy (1) 100. Dionysius' approval there of Isocrates is unlikely to reflect Theophrastus (see note 53 above) and Demetrius may be closer to the original Peripatetic source.

13

Theophrastus on Delivery

William W. Fortenbaugh

"For the doctrine of delivery (*hypokrisis*) the work of Theophrastus was epoch-making." This is the judgment of Kroll in his article on rhetoric,¹ and from one point of view it is certainly correct. Earlier work on the subject was neither plentiful nor inclusive. Prior to Aristotle, *delivery* had been ignored by rhetoricians (Arist. *Rhet.* 1403b21),² and while the subject had lately become part of dramatic and rhapsodic art (*Rhet.* 3.1 1403b22–23), there is no reason to think that Glaucon of Teos or any other early writer (1403b26) had offered an exhaustive analysis. With Aristotle himself the situation is little different. He touches on delivery in both the *Rhetoric* and the *Poetics*, but his remarks are quite brief and largely subordinate to discussions of style.³ In contrast, Theophrastus composed a special treatise *On Delivery* (Diogenes Laertius 5.48), and in so doing gave the subject a measure of importance and independence that it had not previously enjoyed. Still, to claim this much is not to say that Theophrastus was doing very original work or even that he was providing later generations with a useful introduction to the subject of delivery. Indeed, the author of the *Rhetorica ad Herennium* states flatly that no one had written carefully on delivery (3.19). Scholars like Schmidt and Stroux have been impressed by this statement and suggested that Theophrastus' work *On Delivery* was of no great size,⁴ and that it did not contain many precepts useful to later rhetoricians.⁵ Concerning the size of the work we have the evidence of Diogenes Laertius, who lists *On Delivery* as a work of one "book" (5.48). But book length is not a fixed size,⁶ and in any case it tells us little or nothing about the content and quality of the work. Perhaps we must accept that the work *On Delivery* will remain something of a mystery, for we have only a few texts that indicate Theophrastus' views on the subject and none of these texts actually refers by title to *On Delivery*.

Despite these rather dampening remarks, I do think that the surviving texts are of considerable interest, and in section I of this paper I shall

present them for discussion. The resulting impression will be that Theophrastus was in large measure (or at least in certain important respects) building on the work of others: certainly on Aristotle and perhaps on earlier writers on delivery such as Glaucôn of Teos. In section II, I touch upon the way delivery relates to style. No ancient source names Theophrastus in connection with this topic, but given certain remarks by Aristotle and the example of contemporary practice both on the stage and among orators, I am inclined to believe that Theophrastus would have given the matter serious consideration. Section III is rather different, for here I point out that a thorough understanding of delivery requires analyzing emotions in a way not found in any surviving text of Aristotle. That Theophrastus provided such an analysis is not thereby proven but remains a distinct possibility. Finally, in section IV I come back to the treatise *On Delivery* and consider briefly what it might have contained.

I

Among the several texts that offer evidence concerning Theophrastus' views on delivery, the best known and clearest is found in Athanasius' *Prefatory Remarks to Hermogenes' On Issues* (*RhG* vol. 14 p.177.3–8 Rabe):

However also Theophrastus the philosopher says in like manner (i.e. in a way similar to Demosthenes) that delivery is for an orator the greatest (help) in regard to persuasion. (He says this) referring to the principles and the emotions of the soul and the knowledge of these, so that the movement of the body and the pitch of the voice are in harmony with the entire science.

The text is a report and not a real fragment, but there is no reason to think that Theophrastus is being misrepresented. This is certainly true in regard to the power of delivery. Aristotle had used the superlative to characterize this power (*Rhet.* 1403b21), and Theophrastus undoubtedly did the same. Indeed, the extraordinary importance of delivery was no Peripatetic discovery. Demosthenes, for example, is said to have identified rhetoric with delivery (Athanasius, *RhG* vol. 14 p.176.21–22 Rabe) and to have assigned delivery not only first place in oratory but also second and third (Cicero, *Brutus* 142, *Orator* 56, *De oratore* 3.213). Of course these and other similar reports may be anecdotal, but the importance of delivery was (and is) a practical truth obvious to orators and philosophers alike.

Referring delivery to emotions (*pathê*) and more generally to a knowledge of the soul is of greater moment but by no means unexpected, for Aristotle had made the connection with emotion (*Rhet.* 1403b28; cf. 1413b9–10),

and Plato had insisted that the orator acquire knowledge of the soul (*Phdr.* 271A–E). Theophrastus followed their lead and brought delivery into line with the science of psychology. This is not to overlook the fact that the phrase “the entire science” (*tēi holēi epistēmēi* 177.7–6) can be understood in at least two ways. On one interpretation the science in question is delivery,⁷ on another it is psychology. But in view of the immediately preceding mention of “the principles and the emotions of the soul and the knowledge of these,” the latter interpretation is to be preferred.

The mention of bodily movement (*kinēsis tou sōmatos*) together with voice (*phōnē*) is of especial interest, for in *Rhetoric* 3.1 Aristotle focuses exclusively on voice: He states explicitly that delivery resides in the voice and goes on to mention loudness, pitch, and rhythm (1403b27–31). Similarly, in 3.12, when Aristotle connects asyndeton and repetition with delivery, he first talks of change in speech and pitch (1413b22, 31) and then tells us that where delivery is most needed,⁸ there one finds the least exactitude (or finish), and this is where voice is needed, and most of all loud voice (1414a15–17). This focus on voice is striking, but we should not overlook two other passages in the *Rhetoric*. One is found in 3.7: Aristotle warns against an excessive correspondence between style and delivery, and in this context he mentions not only voice but also facial expression (1408b7). The other occurs in 2.8, where Aristotle takes note of the fact that delivery helps the orator arouse pity in the audience. Here voice is combined with gesture, and both are brought under the general heading of delivery (*hypokrisis* 1386a33).⁹ Also relevant is *Poetics* 26, where Aristotle considers the claim that tragedy in comparison with epic is vulgar (*phortikē* 1461b29, 1462a4), for it employs gestures (*schēmata* 1462a3, *sēmeia* 1462a6) and in general motion (*kinēsis* 1461b30, 1462a8, 11) to capture the attention of inferior people. Aristotle rejects this argument on the grounds that it does not touch the art of drama but only that of delivery (1462a5–6).¹⁰ At first glance this portion of the *Poetics* seems to line up neatly with Aristotle’s remarks in *Rhetoric* 3.1, where delivery is called “vulgar” (1403b36) and referred to the defects of one’s audience (1404a7–8), but there is a noteworthy difference. It is that in *Poetics* 26 delivery is not a matter of voice but rather of gesture and more generally of bodily motion. In fact, if voice is under consideration at all, it is being distinguished from delivery and regarded in a positive manner.¹¹ This is not to forget that elsewhere in the *Poetics* Aristotle does connect voice with delivery, namely, within his discussions of “figures of style” (19 1456b10) and “parts of style” (20 1457a21). Whether this involves any confusion on Aristotle’s part need not concern us here.¹² The important point is that the *Poetics* and *Rhetoric* taken together provide ample precedent for relating delivery to both voice and bodily movement, so that here too Theophrastus would seem to be developing the ideas of his teacher.¹³

Associating delivery with both voice and bodily movement is compatible with attributing primary importance to the use of voice. That Theophrastus did this cannot be demonstrated, but there is some evidence to suggest that he may have done so. Plutarch tells us that Theophrastus recognized the way in which voice expresses (*Quaestiones convivales* 623A–C) and excites emotion. In fact, Theophrastus is said to have called hearing the most emotional (*pathêtikôtatē*) of all the senses (*De recta ratione audiendi* 37F–38A).¹⁴ These points are neatly combined by Cicero (*vocis mutationes totidem sunt quot animorum, qui maxime voce commoventur*, *Or.* 55), who in addition recognizes the primacy of voice within the sphere of delivery (*Or.* 60, *De or.* 3.223–24). Certainty here is impossible, but if Cicero is drawing (directly or indirectly) on Theophrastus,¹⁵ then a special concern with voice may well have marked the latter's treatment of delivery.

What we can assert with certainty is that the Theophrastean pair of voice and movement became firmly established during the Hellenistic period. Theophrastus' pupil Demetrius of Phaleron seems to have taken note of the pair when reporting Demosthenes' efforts to improve his delivery (Dionysius of Halicarnassus, *Demosthenes* 53; and Plutarch, *Life of Demosthenes* 11.1–2 = Demetrius, fr. 165–6 Wehrli), and the other Demetrius, i.e., the author of *De elocutione* (first century B.C.?), mentions the pair in passing: the rhetorical period is said to need firm utterance (literally, "rounded mouth") and gesture (literally, "hand") corresponding to the rhythm (20). More formal recognition is given by the author of the *Rhetorica ad Herennium*. He divides delivery (*pronuntiatio*) into quality of voice (*figura vocis*) and movement of body (*motus corporis* 3.19), and then offers a discussion of voice (3.20–25) followed by one of movement (3.26–27). Of especial interest is the subdivision of movement into gesture (*gestus*) and facial expression (*vultus* 3.26). A similar division had already been adopted by the Stoics—Plutarch quotes Chrysippus to the effect that proper delivery resides not only in vocal modulations but also in the expressions or gestures (*schēmatismoi*) of face and hands (*On Stoic Self-Contradictions* 1047A–B = *SVF* 2, fr. 297)—and it would soon be taken up by Cicero. This is especially clear in the *Orator*, where facial expression is joined with gesture and both are distinguished from voice (55). In the *De oratore* gesture and expression are not explicitly subsumed under bodily movement, but they are discussed one after the other: first gesture quite briefly (3.220) and then facial expression at greater length (3.221–23). A special feature of Cicero's analysis is the prominence assigned to eyes (*oculi*). In both the *Orator* 60 and in the *De oratore* 3.221 eyes are said to be informants (*indices*) of the soul, and in the latter work eyes are said to dominate the face (3.221) and to govern facial expression (3.223).¹⁶

If Cicero's treatment of delivery goes back to Theophrastus, then the division of bodily movement into gesture and countenance and the emphasis upon eyes would seem to be Theophrastean. This is not to suggest that Theophrastus or any other writer of the fourth or third century B.C. needed to discover the importance of the eyes. The idea is as old as Greek literature itself (e.g., Homer, *Iliad* 1.104, where the eyes of the angry Agamemnon are said to be like shining fire) and would have been a commonplace in everyday discussions. Philosophers were no exception and in the case of Theophrastus we have the evidence of Barlaamus, who reports Theophrastus' view of emotion, including the fact that emotions are manifested in (by) the mouth, countenance, and eyes (*signa etiam in ore, in vultu, in oculis interdum apparent, Ethica secundum Stoicos* 2.13 = PG vol.151 col.1362C). At issue is only whether Theophrastus' treatment of delivery involved marking off facial expression from gesture and assigning special importance to the eyes. In this regard the evidence is not as clear as might be thought on first reading. Cicero's *De oratore* 3.221 is a case in point:

But everything depends upon the face, and in this itself the entire mastery belongs to the eyes. Therefore that older generation of ours did better, since they used to give not even Roscius greater applause, when he wore a mask. For delivery is entirely concerned with the soul, and facial expression is an image of the soul, and the eyes informants. For this is the one part of the body which can produce as many signs and changes as there are (e)motions of the soul. In fact there isn't anyone who can produce the same effects with his eyes closed. Theophrastus indeed says that a certain Tauriscus used to say that one who in delivery makes his speech while gazing fixedly upon something is "an actor with his back turned."

Here Theophrastus is actually named within a discussion of face and eyes; but whether one can say on the basis of this text that Theophrastus' treatment of delivery involved a special emphasis on the eyes is problematic. For quite apart from textual difficulties,¹⁷ the simple phrase "gazing fixedly upon something" (*contuens aliquid*) could be used without any especial interest in the eyes themselves. We can, of course, imagine a blank stare or sincere squint, but such information is not given¹⁸ and not necessary for understanding the point being made—namely, that the actor or orator who never turns his head loses a portion of his audience. He has, as it were, fixed his gaze on some particular group and turned his back on everyone else. Further, and more important, the words *qui in agendo . . . pronuntiaret*, which I have translated with "who in delivery makes his speech," are quite neutral regarding actor or orator, so that one is in doubt whether Tauriscus' remark concerns dramatic delivery or oratorical delivery (or both). Since the actor

Roscius has been mentioned only a few lines earlier, one may be tempted to follow those scholars who interpret Tauriscus' words as a comment on poor stage delivery.¹⁹ It seems equally possible and perhaps more natural to interpret the passage as a characterization of poor oratorical delivery, i.e., Tauriscus likens the fixed gaze of an orator to the turned back of an actor, to emphasize just how much the orator hurts himself when he ignores part of his audience. While my preference is for the second interpretation, if the first interpretation is correct and Tauriscus' focus is on the stage, or (what is more to the point) if Theophrastus quoted Tauriscus in order to elucidate dramatic delivery, then the issue of eyes and facial expression in general does not even arise. For actors in the fourth and third century B.C. wore masks, and while these masks had expressions, they removed the possibility of varying one's countenance as part of one's delivery.²⁰

Another passage that might be cited to support the claim that Theophrastus emphasized facial expression is Hermippus' report concerning Theophrastus' own manner of delivery. This report, which is preserved by Athenaeus (1.21A–B), states that when Theophrastus lectured he avoided no motion or gesture and on one occasion he imitated a gourmet by sticking out his tongue and licking his lips. Poking fun at a gourmet does suit the author of the *Characters*, but such appropriateness alone cannot convert an anecdote into a (theoretical) statement on delivery.²¹ Moreover, the *Characters* itself offers some reason for thinking Theophrastus was not especially interested in facial expression, for this work contains sketches of thirty different dispositions and yet only once is facial expression mentioned, namely, the smile with which the fabricator is said to engage his victim (8.2).²² This is striking, for Theophrastus was certainly familiar not only with the actor's mask (he knew how a raised eyebrow or curved lip could be used to indicate character) but also with physiognomic theory, including the claim that facial features are, in comparison with other bodily parts, most clear signs of character (cf. ps. Arist., *Phgn.* 814b2–5). Yet in his thirty character sketches Theophrastus all but ignores the countenance much as if he thinks that facial expression is of little or no significance.²³

This is not the place to develop a thesis concerning the *Characters*.²⁴ Instead I want to recall that on one occasion Aristotle makes explicit mention of facial expression (*Rhet.* 3.7 1408b7). He does not dwell on the face, but his remark may well have prompted fuller discussion by Theophrastus. Further, Aristotle tells us that delivery had only lately found its way into the art of tragic drama and epic recitation (*Rhet.* 3.1 1403b22–23) and that certain persons, including Glaucon of Teos, had undertaken studies of the subject (1403b26). For our purposes the important point is not the lateness with which the art of delivery developed but the connection with epic recitation, for rhapsodists, unlike tragic and comic actors, did not wear

masks when they performed. Hence Plato can make the rhapsodist Ion say that when he recites something pitiful his eyes fill with tears, and when he recites something threatening his hair stands on end (*Ion* 535C). Moreover, if Glaucón of Teos (*Rhet.* 1403b26) is to be identified with the rhapsodist mentioned in Plato's *Ion* 530D, then one of the early writers on delivery would have had a personal interest in discussing not only voice and gesture but also the eyes and facial expression in general.²⁵ If this is correct and Glaucón did draw attention to facial expression, then Theophrastus would not have done anything very new if he discussed the countenance together with gesture under the general heading of motion. He would have been following the lead of persons like Glaucón, and by offering an inclusive study of delivery he, in turn, would have influenced later writers like Cicero and the author of the *Rhetorica ad Herennium*.

II

So far our discussion of delivery has been primarily concerned with texts in which Theophrastus is mentioned by name. I now want to touch briefly upon an issue for which there are no named texts, but which Theophrastus almost certainly would have considered and perhaps developed in some detail. This is the way in which style relates to delivery.

In *Poetics* 19 Aristotle begins his discussion of style by taking note that not all speech acts are of one kind. There are commands and prayers, statements and threats, questions and answers (1456b11–12). The basic idea is that different speech acts demand different modes of expression, e.g., statements are made in one tone of voice, questions are asked in another. Frequently there is a close tie between grammar and voice, e.g., orders are marked both by the use of an imperative and by an authoritative tone of voice; wishes are made in the optative and uttered in an earnest, perhaps hopeful, tone of voice. The connection here is an observable phenomenon but is neither necessary nor always desirable. Aristotle sees this and rejects the criticism brought by Protagoras against Homer (1456b15–18). The poet opens the *Iliad* with an invocation couched in the imperative mood. Prayers are not orders, but they may involve a verb in the imperative, as long as the speaker's (the rhapsodist's) voice makes clear that the speech-act in question is one of petitioning and not one of commanding. The point is important—the difference between, e.g., a statement and a question is often only the tone of one's voice (cf. 20 1457a22)²⁶—but Aristotle does not develop the matter in his *Poetics*. Instead he refers the subject to the art of delivery and to the person who is a master of this art (19 1456b10–11). Whether Aristotle has some particular person in mind is problematic. We can only say that Theophrastus is likely to have picked up the matter and

developed it more fully; at least it is easy to imagine him discussing, say, the question (the use of the interrogative form) not only from the standpoint of basic communication (grammar in relation to voice) but also out of a concern with rhetorical effect. He may, for example, have taken note of the way in which Demosthenes uses (rhetorical) questions to achieve greater force, and if he did, then he may well have gone on and discussed the way in which such stylistic devices underlie and determine an orator's delivery (cf. Dionysius Halicarnassus, *Demosthenes* 54).

In this regard, Aristotle's *Rhetoric* contains interesting remarks. In 3.1 we are told that while delivery depends upon nature and is less technical than style, it is nevertheless technical in regard to style (1404a15–16). The Greek is irritatingly compressed and has been understood in different ways,²⁷ but Aristotle's statement becomes clear enough when read in conjunction with later remarks in 3.12. Here Aristotle first contrasts literary style (*lexis graphikē*) with the style of debate (*lexis agōnistikē*) and then goes on to state that the latter style is especially suited to delivery (*hypokritikōtatē* 1413b9). In addition he says that dramatic elements (*ta hypokritika*) are appropriate in debate, and that when they are separated from delivery they fail to do their job (1413b17–19). The elements in question are stylistic features like asyndeton and repetition. They are, Aristotle tells us, condemned in literary style but not in the style of debate; and rhetoricians use them, for they (the stylistic features) are suited to delivery (*hypokritika* 1413b22).²⁸ The importance of these remarks has already been noticed in the scholarly literature.²⁹ Here I want only to emphasize the connection between these remarks and Aristotle's earlier claim in 3.1, that while delivery depends upon nature, it is technical with regard to style (1414a16). In 3.12 Aristotle is not denying the importance of natural talent for effective delivery. He is rather recognizing the way in which style underlies and guides delivery and so the way in which a speech writer at the moment of composition determines the actual delivery of a speech. When the writer introduces repetition or asyndeton, he is requiring variety in vocal delivery (1413b22–31), and when his overall plan calls for, say, emotional appeal, he deliberately employs stylistic devices such as repetition and asyndeton, for these devices support the variations in voice that make up such an important part of a convincing appeal to the emotions.

Aristotle's remarks in *Rhetoric* 3.12 are not ignored by later rhetoricians. Demetrius, the author of *De elocutione*, follows Aristotle both in opposing literary style to that of debate and in connecting asyndeton with delivery. He states clearly that lack of connection stimulates (193) or even compels (194) delivery (cf. 271), while the use of connectives is unemotional and without scope for delivery (194).³⁰ That Theophrastus failed to make this point is most improbable. He knew the work of his teacher (i.e., *Rhetoric*

3.12), and if that were not enough, he had the example of contemporary practice: not only that of the orators but also that of dramatic poets. Much as Aristotle illustrates the relationship between style and delivery by citing lines from the comedies of Anaxandrides (*Rhet.* 3.12 1413b25–28), so Theophrastus may well have cited the plays of his own pupil Menander, e.g., the opening act of *Dyscolus* (316 B.C.), for here the slave Pyrrhias, fleeing Knemon, rushes onto the stage and expresses his excitement in lines marked by both asyndeton and repetition (81–82). Certainly none of this was lost on another pupil of Theophrastus—Demetrius of Phaleron, who saw quite clearly the way in which delivery is dependent on and determined by style. His examples (at least those preserved for us by later authors) are rhetorical: the long periods of Isocrates that are bad for delivery (Philodemus, *Rhetorica* 4 [vol. 1 p. 198.9–13] = fr. 169 Wehrli); the metrical oath that expressed the excitement of Demosthenes (Plutarch, *Demosthenes* 9 = fr. 163 Wehrli). It is conceivable that Theophrastus was as much influenced by his pupils as they were by him, but whatever the pupil-teacher relationship, my guess is that Theophrastus recognized fully the way in which mastery of style gives one a technical control over delivery—not vocal control but the kind of control involved in knowing which stylistic features call for which modes of delivery and when they are appropriate.

While it is hard to overemphasize the relationship between style and delivery, two brief caveats may be in order. The first concerns the four Theophrastean virtues of style: correctness, clarity, appropriateness, and ornamentation. The way in which style relates to and determines delivery may have encouraged transferring these virtues from style to delivery, but it would be a mistake to think that the move was made by Theophrastus. It occurred much later (see Quintilian 11.3.30–65) and was something less than a success.³¹ The second caveat concerns the extent to which style and delivery should correspond. As a general rule the two ought to be brought into line, but on occasion the correspondence should be broken, for otherwise it becomes obvious and therefore artificial rather than artful. Aristotle makes this point with special reference to harsh words (*Rhet.* 3.7 1408b5–10). Theophrastus certainly would have made the same point and probably at some length.

III

Both Aristotle and Theophrastus connected delivery with emotional response. In section I, I suggested that Theophrastus was following the lead of his teacher in this. Now I want to introduce an important caveat—that Aristotle's treatment of emotion in *Rhetoric* 2.1–11 does not meet the needs of a full-blown theory of delivery.³² In particular, it takes no account of

voice and bodily movement and so ignores the two elements picked out by Theophrastus and discussed by subsequent writers on delivery. This disinterest in voice and bodily movement is, of course, no fault. Aristotle's discussion in *Rhetoric* 2 is not meant to be an exhaustive treatment of emotion carried out from every possible point of view; it is rather a specialized account whose focus is persuasion "through the hearers" (1.2 1356a14), namely, it is tailored to suit the needs of a particular mode of persuasion that works through *logos* (1356a1)—i.e., through what the orator says—and that puts the audience into an emotional frame of mind favorable to the orator's case (1356a3, 14–16). Given this orientation, Aristotle's account does just what it should do. It describes the condition of men prone to particular emotions and makes clear the grounds on account of which and the persons at whom each emotion is felt. Provided with this information the orator will be able to tell whether his audience is susceptible to a particular emotion (if the audience is not already predisposed to the emotion, he may be able to bring about the desired predisposition), and if conditions are right, he will know how to arouse and direct the emotion through what he says (cf. 2.2 1380a2–5).³³

Delivery is different from persuasion "through the hearers." It does not aim to arouse emotion through *logos* but rather to express emotion by means of voice and bodily movement. This is not to forget that orators use delivery to arouse and calm their audience, but they do so while (and largely because) they are conveying an impression of themselves: that they are calm or angry, deeply moved or quite unmoved;³⁴ nor do I deny that what is said contributes greatly to the impression which an audience forms of the speaker. What an orator says and his delivery can and should work together.³⁵ Only the latter is not a matter of *logos* but rather of voice and movement. This means that any account of *pathē* suitable to the needs of delivery will contain information different from that found in Aristotle's *Rhetoric* 2.1–11.

The account of delivery in *De oratore* 3.213–27 may be instructive here, for Cicero not only characterizes delivery as a means by which emotion (*animi permotio*) is displayed or imitated (3.215), he also tells us that every emotion (*motus animi*) has by nature its own particular look, gesture, and sound (3.216). He says that voice is most important (3.224) and runs through the kinds of voice that belong to anger, compassion, fright, energy, joy, and dejection (3.217–19). He touches upon movements of hand and foot (3.220) and dwells somewhat longer on facial expression and in particular the eyes, which are said to indicate emotion now through an intense look, now through relaxation, a stare, or a cheerful glance (3.222). That Theophrastus offered a similar account is, of course, speculation, but according to Barlaamus (*Ethica secundum Stoicos* 2.13, quoted above in section I) he did recognize that emotions are occasionally manifested in (by) the mouth,

countenance, and eyes. The adverb *occasionally* (*interdum*) should not be pressed—Barlaamus is writing polemically and with little attention to detail—(but it does, I think, reflect the truth, namely, that for Theophrastus the emotions are typically, but not always, accompanied by characteristic changes in the face, body, and voice. For example, when men become enraged they more often than not distort their face, move their limbs violently, and begin to shout. These changes are natural and yet only for the most part; enraged individuals occasionally control their voice and restrain their movements. For our purposes the important point is that Theophrastus may have anticipated Cicero's claim that each emotion has by nature its own particular look and voice and gesture (*omnis . . . motus animi suum quendam a natura habet vultum et sonum et gestum*, *De or.* 3.216). Delivery is not concerned with (purely) conventional manifestations of emotion but rather with those signs that ordinary people manifest in their everyday lives. Theophrastus almost certainly saw this and urged the orator to study delivery, not because the subject matter is something quite new, but because the orator is more effective when he controls his voice and gesture (cf. *De or.* 3.215). This control sometimes takes the form of disengaged play-acting. When the situation calls for anger or rage, the orator will feign the emotion if he is not personally aroused. But it is a commonplace that the orator is more convincing when he throws himself into his speech and feels the appropriate emotion (cf. Cicero, *De or.* 2.189–90). In this regard the orator is no different from the actor and rhapsodist. We may compare Plato's *Ion*, where Socrates asks the rhapsodist whether he imagines in his mind that he is present at the events being related. Ion responds affirmatively, telling how his eyes water and his hair stands on end (535B–C). This response is of especial interest because it mentions certain signs that are difficult to imitate at will. Perhaps some people learn to shed tears, but controlling the hair on one's head is quite impossible for normal men. And if hair standing on end seems more typical of animals than human beings, we might mention changes in coloration. When men become angry their eyes redden and when they feel shame their ears do the same (cf. ps. Aristotle, *Problems* 32.1 960a36–b7, 32.8 961a8–15). These are especially telling signs of emotion, precisely because they cannot be feigned or controlled; when they are present, we believe that the person suffering these changes is actually angry or ashamed. And when an orator involves himself in his case, becomes aroused and so combines these physiological alterations with other changes in voice and movement, then he is most convincing.

This is not to say that one studies delivery only as a hedge against those occasions when one fails to feel the appropriate emotion and therefore must fake emotional involvement. On the contrary, voice and gesture need disciplining if they are to be most effective. They need to be sharpened and

also to be studied with reference to the several kinds of audience, for the voice and gesture appropriate to a large popular assembly is not necessarily identical with that appropriate to a smaller council or court of law. Further, gesture may help the orator become involved and feel the appropriate emotion. We may compare *Poetics* 17, where Aristotle says not only that the poet should, to the best of his ability, put scenes before his eyes and see them as if he were present (1455a22–26), but also that the poet should make use of gesture, for persons experiencing emotion are more convincing (1455a29–31). The passage has been subject to various interpretations, but if I understand it correctly, Aristotle is saying that gesture is a useful way to arouse emotion in oneself, and that this is important for poets, since they are more likely to write convincingly when they are actually experiencing the emotions they wish to render into words.³⁶ The application to the speech writer and to the orator is straightforward. Both use gesture to arouse themselves: the former in order that he may produce a more vivid and exciting text, the latter in order that he may better reach his audience.

More could be said concerning self-induced emotion, but it may be of greater interest to note that delivery is able to express more than anger, fright, and generally emotions tied to particular beliefs.³⁷ For example, in the *De oratore* Cicero says that the voice which signifies *vis* is intense, vehement, and eager with a certain impressive ardor (*contentum, vehemens, imminens quadam incitatione gravitatis*, 3.219). He then illustrates *vis* with four verses from Accius' *Atreus*. The energetic character of these verses is, I think, clear enough (diction determines delivery!), but it may be helpful to mention briefly a passage in Book 1 of the *De oratore*, where Cicero makes Cotta say that while he was able to appreciate the energy (*vis*) and ardor (*incitatio*) with which Crassus spoke, he could not follow the way in which the speech developed (1.161). Here Cotta is made to refer to the vigorous rapidity with which Crassus delivered his speech. The focus is no different later, in Book 3, when Cicero discusses *vis* within the treatment of delivery. He is concerned with what might be called energy—a style or manner that is not tied to any particular belief or assessment.

Treating such a stylistic feature within a discussion of delivery is hardly surprising. After all, in Book 2 Cicero considers how to secure favor with one's audience, and in this context he both takes note of vehement ardor (*vehementi quadam incitatione*, 2.183) and explicitly recognizes the importance of mild delivery (*actione leni* 2.184). What might give us pause is that Cicero tucks *vis* in between anger, compassion, and fright (which precede 3.217–18) and joy and dejection (which follow 3.219). Each of these is an emotion based on certain beliefs and assessments, so that Cicero appears to be treating *vis* as if it too is an emotion involving grounds and object. My suspicion is that Cicero never gave the matter any thought. For him it would be

sufficient that *vis* is easily included under the general heading of *animi permotio* (3.215) or *motus animi* (3.216). That Theophrastus focused on the matter and drew a clear distinction between energetic manner and emotion grounded on belief is nowhere reported, but given his interest in stylistic traits (e.g., in the *Characters*), I am inclined to think that he did.³⁸ In any case, his work *On Delivery* would have better served orators if it offered an inclusive account that made room for energy, mildness, and the like. To have done this and to have spelled out the way in which different manners are marked by differences in voice and bodily movement would have made for a discussion of some length,³⁹ but nothing which would be beyond the interests and capabilities of Theophrastus.

IV

Over seventy years ago Johannes Kayser published an article in which he challenged the then, and still, orthodox view that Theophrastus' *Peri hypokriseōs* was rhetorical in its orientation. He called attention to the fact that Eustathius' like-named treatise is largely concerned with the vice of hypocrisy (dissimulation, pretense) and further pointed out that Eustathius' description of the hypocrite contains much that one can call Peripatetic and even Theophrastean, e.g., the structure of Eustathius' description has features that recall Theophrastus' *Characters*;⁴⁰ the content invites comparison with Peripatetic treatments of flattery (*kolakeia*).⁴¹ All this suggested to Kayser that the content of Theophrastus' *Peri hypokriseōs* was similar to that of his work *On Flattery* (Diogenes Laertius 5.47). Kayser did not rule out some discussion of the orator's delivery, but he was prepared to assign Theophrastus' detailed discussion to a second, purely rhetorical, work.

Kayser's thesis has not found support among modern scholars, and with good reason, for a treatise written in the twelfth century A.D. and occasioned by clerical feuding is unlikely to have a very close relationship to the work of an early Peripatetic philosopher. Moreover, Eustathius' use of the word *hypokrisis* is very much within the Christian tradition. This is not to say that a writer of the Hellenistic period could not have used *hypokrisis* in an inclusive sense roughly equivalent to "dissimulation" (cf. Polybius' usage at 35.2.13 with Aristotle's use of the cognate verb at *EE* 1243b8), but it is to say that in the absence of further evidence a distinctly secondary usage should not be forced upon the Theophrastean title *Peri hypokriseōs*.

Although Kayer's positive thesis must be rejected, the negative side of his remarks are not all wrong. The fact is that we know almost nothing about Theophrastus' *Peri hypokriseōs*. The subject was certainly delivery, and on the basis of the Athanasius text quoted above in section I, we may conclude that the delivery of an orator received significant attention. The

way in which an orator's delivery expressed emotion would not have been ignored⁴² and in all probability there would have been some discussion of the way in which a speech writer determined delivery through stylistic devices. Still, a single short report by a later rhetorician—and one which does not name the work *On Delivery*—is not a solid basis for claiming that the Theophrastean treatise was exclusively or even primarily rhetorical in orientation. Cicero's *De oratore* 3.221, also quoted in section I, makes one think of poetics, and this is hardly surprising, for Aristotle tells us that the earliest discussions of delivery concerned tragedy and epic (*Rhet.* 3.1 1403b22–26). In fact, fourth-century orators like Aeschines and Demosthenes were significantly influenced by the dramatic delivery of their day. The former actually performed on the stage (Demosthenes, *Or.* 18.265, 19.200),⁴³ and the latter is said to have turned to the actors Neoptolemus, Andronicus, and Satyrus in order to improve his delivery (ps. Plutarch, *Lives of the Ten Orators* 844F–845B; Plutarch, *Demosthenes* 7.1–2).⁴⁴ Of course, Theophrastus may have intended to fill a hole in the rhetorical literature of his day, and therefore may have kept his attention narrowly focused on the needs of orators, introducing drama only by way of illustration. The fragments of Demetrius of Phaleron might appear to support this possibility, for the relevant fragments (161–69) all focus on oratory. But the number of these fragments is not especially large, so that any conclusion about Demetrius, let alone Theophrastus, would be at best quite tentative. Moreover, it seems clear that among subsequent Peripatetics and persons within the Peripatetic tradition the phrase “on delivery” (*peri hypokriseōs*) continued to have strong associations with the stage. A good example is found in the treatise *De elocutione*, where Demetrius (not the Phalerean) first tells us that the use of connectives is not conducive to delivery (194) and then goes on to say that there are other subjects of investigation in regard to delivery. As an illustration he mentions Euripides' *Ion* (161–69), where the play's eponymous hero takes up his bow and threatens a swan which is about to foul sacred statues. Demetrius observes that running to fetch a bow, turning up the head to address a swan, and all the other stage business provide the actor with a variety of movements. And having said this Demetrius cuts himself off with the remark, “But our present discussion is not about delivery” (195). Here the phrase “about (on) delivery” (*peri hypokriseōs*) is not the title of a particular treatise, but the phrase does suggest that a Peripatetic-oriented writer would include dramatic delivery under the general heading “On Delivery.”⁴⁵ Perhaps Theophrastus served as a model, for he may well have surveyed earlier work (cf. Arist., *Rhet.* 3.1 1403b22–26) and given independent attention (even pride of place) to the delivery of actors (*hypokritai*) and rhapsodists.

Still another possibility is suggested by Athenaeus' *The Sophists at Dinner* 1.22C.

Theophrastus says that Andron, the flute player from Catana, was first to make movements and rhythms with his body while playing the flute. From this, dancing (came to be called) "playing-the-Sicilian" among the ancients. After him there was Cleolas of Thebes.

This passage has been compared with Aristotle's *Poetics* 26 1461b30–32,⁴⁶ and rightly so for in the Aristotelian passage overacting on the tragic stage is illustrated by worthless flute players who whirl in circles when they have to imitate a discus, and who drag about the leader of the chorus, when they play the "Scylla." What especially interests me is the possibility that Theophrastus discussed the movements of Andron, Cleolas, and other flute players in his work *On Delivery*. Of course, the Aristotelian parallel suggests Theophrastus' *Poetics* (Diogenes Laertius 5.47,48),⁴⁷ while the focus on musicians points to the work *On Music* (Diogenes Laertius 5.47).⁴⁸ But there is no reason why Theophrastus in *On Delivery* would have entirely excluded musical performance. Andron and Cleolas may have been mentioned either by the way or as part of a segment devoted to the performance⁴⁹ of musicians. A firm decision is impossible, but perhaps we can say that the existing pieces of evidence—both the precedent afforded by Glaucon and the Theophrastean texts already surveyed—suggest that the treatise *On Delivery* was an inclusive work that discussed voices and motions appropriate not only to orators but also to musicians, actors, and rhapsodists.

ABBREVIATIONS

The following abbreviations are used throughout the notes (other references are given in full):

- Fantham = E. Fantham, "Quintilian on Performance: Traditional and Personal Elements in *Institutio* 11.3," *Phoenix* 36 (1982) 243–63.
 Fortenbaugh (1) = W. Fortenbaugh, "Aristotle's *Rhetoric* on Emotions," *Archiv für die Geschichte der Philosophie* 52 (1970) 40–70.
 Fortenbaugh (2) = W. Fortenbaugh, "Die Charaktere Theophrasts, Verhaltensregelmäßigkeiten und aristotelische Laster," *Rheinisches Museum* 118 (1975) 62–82.
 Kayser = J. Kayser, "Theophrastus and Eustathius *peri hypokriseōs*," *Philologus* 69 (1910) 327–58.
 Kennedy = G. Kennedy, *The Art of Persuasion in Greece* (Princeton 1963).
 Kroll (1) = W. Kroll, "Quintilianstudien," *Rheinisches Museum* 73 (1920–24) 269–71.
 Kroll (2) = W. Kroll, "Rhetorik," *Paulys Real-Encyclopädie* Suppl.7.1075–6.
 Lucas = D.W. Lucas, *Aristotle's Poetics* (Oxford 1968).

- Nadeau = R. Nadeau, "Delivery in Ancient Times: Homer to Quintilian," *The Quarterly Speech Journal* 50 (1964) 53-80.
- Regenbogen = O. Regenbogen, "Theophrastos," *Paulys Real-Encyclopädie*, Suppl. 7.1354-1562.
- Schmidt = M. Schmidt, *Commentatio de Theophrasto rhetore* (Halle 1839).
- Sonkowsky (1) = R. Sonkowsky, "An Aspect of Delivery in Ancient Rhetorical Theory," *Transactions of the American Philological Association* 90 (1959) 256-74.
- Sonkowsky (2) = R. Sonkowsky, "Euphantastik Memory and Delivery in the Classical Rhetorical Tradition," *Rhetoric* 78, ed. by R.L. Brown, Jr. and M. Steinmann, Jr. (Minneapolis 1979) 375-85.
- Stroux = J. Stroux, *De Theophrasti virtutibus dicendi* (Leipzig 1912).

NOTES

An earlier and shorter version of this paper was read on June 7, 1982 at the Institute of Classical Studies, London University. I want to thank especially Richard Sorabji, the organizer of the meeting, and Richard Janko, who both offered helpful criticism. A fuller version, including material now found in "Theophrastus on Emotion" (chapter 10 in this volume), was presented at the 1983 Liverpool Conference on Theophrastus.

1. Kroll (2) 1075.
2. Whether Aristotle subsequently qualifies the claim that delivery has been ignored by rhetoricians depends on how one construes the difficult lines 1404a12-16. If one takes *ekeinē* (a12) to refer to delivery then Aristotle seems to be introducing a qualification: "When the principles of delivery have been worked out, they will produce the same effect as on the stage, but only very slight attempts to deal with them have been made and by a very few people, as by Thrasymachus in his *Appeals to Pity*" (Oxford translation of W. Rhys Roberts). This interpretation is certainly possible and has the endorsement of many respected scholars: L. Spengel, *Technōn synagōgē sive artium scriptores* (Stuttgart 1828) 97; E.M. Cope, *An Introduction to Aristotle's Rhetoric* (London 1867) 277-78; H. Diels, "Über das dritte Buch der aristotelischen Rhetoric," *Phil. u. hist. Abhandlungen der königl. Akademie der Wiss. zu Berlin* 4 (1886) 32; Kennedy 69; Nadeau 54; Francis Sparshott in *The Older Sophists*, ed. by R. Sprague (Columbia, S.C. 1972) 92. See also Schmidt 61, who actually alters the text in favor of the above interpretation. However, if one takes *ekeinē* (a12) to refer to style which has been mentioned only a few lines earlier (a8), then Aristotle is not qualifying his previous assertion but rather making the following statement: "When the art of style has been developed, it will have the same effect as delivery, but only slight attempts to deal with it have been made by certain men like Thrasymachus in his *Appeals to Pity*." This interpretation also has its supporters, beginning with the Anonymous Commentator (*CIAG* 21.2 p.161.32-3) and including modern scholars like H. Sauppe, *Oratores Attici*, Part 2 (Zurich 1895-50) 164.31; L. Radermacher, "Artium scriptores," *SB Wien* 227.3 (1951) 74; and F. Solmsen in the Modern Library edition of *Aristotle, Rhetoric and Politics* (New York 1954) 166, n. 1. In my opinion this second interpretation is the more natural both because of the immediately preceding context—Aristotle's attention has turned to style at a8—

and because the unqualified phrase *tēi hypokritikēi* (a13) seems to refer to delivery in general. To understand this phrase in the restricted sense of “stage delivery” we need an additional qualifier like *tēi tēs tragōdías* (Radermacher 74). Moreover, we can draw no conclusion from the title of Thrasyarchus’ book. In a work on emotional appeal remarks on style are just as appropriate as remarks on delivery. But whatever the truth about Thrasyarchus’ work and Aristotle’s report at 1404a12–16, it seems certain that teachers of rhetoric prior to Aristotle had done very little to develop a proper (coherent, systematic) art of delivery.

3. An exception is *Poetics* 26, which is discussed in section I below.
4. Schmidt 62.
5. Stroux 70; and H. Caplan, [*Cicero*] *ad C. Herennium*, Loeb edition (London 1954) 194–95, n.c.
6. We must not assume that there is a fixed book length, so that all books are of a (roughly) equal length. For the assumption generates as many problems as it solves. Without claiming to decide anything, I would mention Theophrastus’ work *On Style*. Diogenes’ list assigns the work one book (5.47), yet the list of Aristotelian works preserved by Diogenes contains an *On Style* in two books (5.24). If we assume both that the Theophrastean discussion of style was longer and that longer discussions are always marked by more books, then we may be tempted to emend Diogenes’ list at 5.47 (F. Wehrli, “Der Peripatos bis zum Beginn der römischen Kaiserzeit,” *Die Philosophie der Antike* 3, ed. H. Flashar [Basel 1983] 499). But if we go this route should we opt for four books (H. Usener, *Analecta Theophrastea*, Diss. [Bonn 1858] 9) or five (H. Rabe, *De Theophrasti libris Peri lexeōs*, Diss. [Bonn 1890] 11–12)? Or should we take a different approach and say that the second book of the Aristotelian work was not concerned with style but with arrangement and that the two books have become one book, namely, Book 3 of the *Rhetoric* in its present form (P. Moraux, *Les listes anciennes des ouvrages d’Aristote* [Louvain 1951] 103–4)? At least this approach recognizes that book division and book size are subject to change.
7. Kennedy 283.
8. I am reading *hypokriseōs* (1414a16) with the manuscripts and modern editors like Dufour-Wartelle and Kassel. Ross’s change to *hypokrisis* is an error.
9. The text at *Rhet.* 1386a33 is uncertain. If one reads *kai esthēsi* with Ross, then Aristotle combines voice not only with gesture but also with dress, and all three are brought together under the heading of delivery. Alternatively one may read *kai aisthēsei* with Kassel, so that voice and gesture are grouped together with “what works on the senses.” The latter reading finds some support in *Poetics* 15 1454b16 and may well be correct (see J. Vahlen, *Beiträge zu Aristoteles’ Poetik* [Berlin 1914] 268–67). The former is attractive in that it takes (more or less) explicit account of an important truth—a speaker should come before his audience appropriately dressed (Hermippus, *ap.* Athenaeus 1.21A, reports that when Theophrastus lectured, he used to arrive at the Peripatos in splendid attire), and in the course of his speech a speaker should *use* his dress to strengthen certain effects. See Quintilian 11.3.137–49. The speaker who aims to arouse pity might well follow Quintilian’s advice and end his speech in a disheveled state (11.3.147).
10. Aristotle argues that when gesture is overused and motion ignoble, censure is in order, but tragedy does its own work without motion: reading reveals the character of a tragedy, so that motion (delivery) is not necessary to the tragic art (1462a6–14). Here Aristotle does not deny that an actor’s delivery may be correct (i.e., not over- or underdone), but he views it as something extraneous—

- like spectacle (*opsis*) which is twice marked off from the art of poetry (1450b16–18, 1453b1–6)—and therefore properly omitted from a work on poetics.
11. When Aristotle says that tragedy has its effect through reading (1462a11–13, 17–18), he means reading aloud (cf. 1453b4–6) and therefore is tacitly approving the use of voice. We may compare his attitude to the recitation of rhapsodists. Here, as in the case of tragedy, it is not oral presentation but rather gesture and bodily movement which are under suspicion and deemed extraneous or nonessential (1462a3, 11–14).
 12. Any apparent inconsistency should be seen as part of a larger problem, namely, the patchwork nature of the *Poetics* as a whole. For some general remarks see Lucas ix–xi.
 13. It may be that Glaucon of Teos and other early writers of delivery (Arist., *Rhet.* 1403b26) took account of both voice and movement, so that Theophrastus is following their lead as well as that of Aristotle. On Glaucon see below, this section.
 14. In the *Quaestiones convivales* 623A–C, Plutarch makes clear that he is drawing on Theophrastus' work *On Music*. He may be using the same source in the *De recta ratione audiendi* 37F–38A. But even if he is drawing on a musical treatise, the idea is easily transferred to oratorical and dramatic delivery.
 15. Kroll (2) 1075.
 16. The *Rhetorica ad Herennium* refers only twice to the speaker's look or glance (*aspectus* 3.27) and does not use the word eyes (*oculi*) at all. Whether this is significant is difficult to say.
 17. In the next to last sentence the participle *convivens* ("with his eyes closed") is found in manuscript M but not in L. Ernesti wanted to read *contuens*.
 18. See below, note 22 on Theoph. *Char.* 2.10.
 19. See A. Wilkins, *M. Tulli Ciceronis De oratore* (Oxford 1892) 541, and H. Rackham's Loeb translation: "Theophrastus indeed declares that a certain Tauriscus used to speak of an actor that recited his lines on the stage with his gaze fixed on something as 'turning his back on the audience.'"
 20. Cicero says (or has Crassus say) that the actor Roscius received little applause when he wore a mask. This seems to imply that Roscius won loud applause when he acted without a mask, and if this is correct, then Cicero may be thinking of unmasked actors when he cites Tauriscus. This would be rather careless but not impossible for Cicero. However, it should be noted that Cicero's remark concerning Roscius is not always understood in the above manner. F. Sandbach, *The Comic Theater of Greece and Rome* (New York 1977) 111–12 argues that Cicero's words need not imply that Roscius ever acted unmasked, for the past participle *personatum* can mean "because he wore a mask." This interpretation fits well with the report of Donatus that masks were already being used in the time of Terence (*De comoedia* 6.3 [vol.1 p.26.7–8 Wessner]) but poorly with the statement of Diomedes that masks were actually introduced by Roscius, who wanted to conceal a squint (*Ars grammatica* 3, caput de poematibus [GL vol.1 p.489.10–13]). Combining this statement with the first (and usual) interpretation of Cicero's words, we might say that Roscius purchased a cosmetic gain at the cost of effective delivery.
 21. Such a story hardly proves that Theophrastus did not demand *to prepon* in delivery. He would have agreed with the author of the *Rhetorica ad Herennium* that gesture should not be conspicuous for its eloquence or grossness, lest one seem to be an actor or a day laborer (3.26).

22. My claim here concerns only the character being sketched. *Char.* 8 concerns the fabricator and 8.2 mentions *his* smile; 8.7 is quite different, for here the fabricator is made to support his story by mentioning a change in the facial expression of other people (the city officials). When the offensive man is said to throw his head back and belch (11.3), nothing is reported concerning his facial expression. Similarly, when the flatterer talks to other people and at the same time looks off at the person whom he wishes to flatter (2.10), we can imagine a wink or smile, but such information is not given by Theophrastus. See above on Tauriscus' remark concerning one who delivers a speech while gazing fixedly upon something.
23. We may compare Aristotle's description of the high-minded man. Voice and movement are taken into consideration—the former is deep and the latter slow *EN* 1125a12–14), while facial expression is totally ignored.
24. For some brief remarks see E.C. Evans, "Physiognomics in the Ancient World," *Transactions of the American Philosophical Society* NS 59.5 (1969) 38–39.
25. The same Glaucon may be mentioned by Aristotle at *Poetics* 1461b1, but caution is necessary, for as D.W. Lucas 247 observes, the name is quite common.
26. Lucas 202.
27. On one interpretation Aristotle says that the principles of style are technical (cf. the Oxford translation of W. Rhys Roberts). On another he says that when delivery is applied to style, then it (delivery) is something technical (cf. the Budé translation of Dufour-Wartelle and that of Fyfe in the Loeb library). If the former is correct, then Aristotle sharpens the contrast between style, which he treats at length (3.2–12), and delivery, which he does not. However, the Greek suits the latter interpretation better, which is in any case strongly supported by Aristotle's remarks in 3.12.
28. I follow Kassel, who prints *hypokritika* (1413b22), which he reports to be the reading of two manuscripts. Ross prefers *hypokritikē*, which also has manuscript support. On Ross's reading the translation would run "for it (the style of debate) is given to delivery."
29. See especially the excellent remarks by Robert Sonkowsky (1) 259–61 and cf. Nadeau 54–55 and Sonkowsky (2) 375. One caveat is in order: Sonkowsky's (1) interpretation of 1404a16–19, is, I think, in error. The passage runs as follows: "Wherefore prizes come in turn also to those who have this capacity, just as they come to orators in accordance with (by) their delivery, for written discourses owe their force more to style than to thought." Sonkowsky 261 thinks that the initial contrast or rather comparison is between "actors with histrionic ability" and "orators who excel in delivery," but this interpretation fails to consider the movement of 3.1. The chapter is primarily an introduction to the discussion of style in 3.2–12. At 1403b21 Aristotle mentions the power of delivery and then goes on to make some remarks on delivery including the fact that it wins prizes (1403b32). When his focus returns to style (1404a8), Aristotle thinks it important to point out that style, too, conveys power and produces prizes. This he does in 1404a16–19, first by comparing men of capacity in regard to style with orators gifted in delivery (a16–18), and then by stating that written work acquires its power more through style than through thought (a18–19). Actors are certainly not mentioned in a16–17. If another interpretation is possible, it is Cope's (ad loc.), namely, that Aristotle refers to men who have the faculty of delivery in accordance with style (*hypokritikē kata lexin*). This interpretation seems second best but is at least consistent with Aristotle's focus on style.
30. See also *De elocutione* 20, already introduced above in section I.

31. See Stroux 71; Kroll (1) 269–70; Kennedy 284; and Fantham 252. On the four virtues of style (apart from delivery) see Doreen Hines, “Theophrastus and the Theory of Style,” chapter 12 in this volume.
32. Cf. Sonkowsky (1) 267.
33. For further discussion see Fortenbaugh (1) 53–64.
34. Cf. Cicero, *Orator* 55 and *De oratore* 2.189. On voice as especially effective in moving one’s audience, see above, section I.
35. Cf. Cicero, *De oratore* 3.222.
36. See Lucas 175–76.
37. On anger and fright see Fortenbaugh (1) 54–55.
38. A trait like want-of-perception (*anaisthēsia*, *Char.* 14) may have its basis in some physiological condition rather than a particular kind of judgment. Unsociability (*authadeia*, *Char.* 15) is a roughness (*apēneia* 15.1) in manner not tied to any particular belief. See Fortenbaugh (2) 74–82.
39. The discussion may have been even longer, if Theophrastus took note of dress. For just as dress can be used to express and arouse emotion (see above, note 9 on Aristotle, *Rhetoric* 2.8 1386a33), it can also be used to exhibit a certain style or manner. See, e.g., Quintilian 11.3.145–6.
40. Kayser 347–48.
41. Ibid. 348–55.
42. It would be a mistake to assume that all material relevant to delivery was included (exhaustively discussed) within the treatise *On Delivery*. Emotion is a case in point. Theophrastus may have referred to his work *On Emotions* both to avoid repeating himself and to simplify the discussion of emotions within *On Delivery*.
43. For further references see J.B. O’Connor, *Chapters in the History of Actors and Acting in Ancient Greece* (New York 1966) 74–77.
44. Ibid. 78–79, 119–20, 131–32; Fantham 255–56.
45. Whether or not Demetrius was a Peripatetic, his sympathies for the school are obvious. Hence the earlier tendency to attribute the *De elocutione* to Demetrius of Phaleron.
46. Lucas 252.
47. Diogenes Laertius lists two works called *On Poetry* (5.47 and 48). The work listed second is distinguished by the addition of “another” (*allo*). How the two works (if they were two) related to each other is not known.
48. Regenbogen 1532.
49. Fantham regularly translates *hypokrisis* as *performance*—what she calls “a better and more comprehensive term than delivery” (243). When one considers everything that might be included in a discussion or work *Peri hypokriseōs*, it is hard not to agree with her.

14

Theophrastus on Pitch and Melody

Andrew Barker

Theophrastus was well known in antiquity as a writer on music,¹ but though his work on the subject was apparently substantial and respected both by musicological specialists and by persons of more general culture, we know rather little of its content. We have, however, one long fragment quoted by Porphyry,² a complex passage of sustained argument which repays detailed investigation.³ I hope that an analysis of this quotation, judiciously associated with the hints contained in passing allusions by other ancient authors, will enable us to put together a tentative reconstruction of Theophrastus' opinions and identify the focus of his interest. An important part of this task is to locate the questions that set him off on the investigation that our fragment represents. Since the passage, according to Porphyry, is merely an extract from the second book of his work *Peri mousikēs*, this is not necessarily a good guide to the direction of his musical interests in general. Still, the weight and detail of the argument indicate that Theophrastus believed the matters discussed here to be of some importance—if we can find ways of linking its concerns with those suggested by allusions elsewhere, we can have some confidence that they point to significant themes within this overall project. It is natural to look for additional help from other authors with whose work that of Theophrastus shows affinities. We can reasonably expect to find resemblances between his aims and arguments and those of other writers in the Lyceum, and perhaps the Academy too, but we shall find that the differences are in some respects more striking than the similarities. Theophrastus' writings on music stand somewhat apart from the investigations undertaken by his closest associates. If it is possible to place his questions, and answers, within the framework of some other tradition of thought, as representative of another independently identifiable pattern of inquiry, we may be able to use evidence from this latter source to cast further light on the concerns and ideas of Theophrastus himself.

The fragment poses one special problem as a starting point for a reconstruction of Theophrastus' musical theories and attitudes. Only a sentence

or two at the beginning and end, and a light scattering of others along the way, are deliberately designed to express his positive opinions. The bulk of the piece is polemic: it can provide, at best, only indirect evidence for Theophrastus' own views. Nevertheless, the polemic is worth studying for three main reasons. First, the unravelling of its complexities provides a fascinating exercise for anyone interested in the history and practice of abstract argument. Second, we can learn at least a little of the author's own views by getting a clear picture of what he denies, and of the identity of the schools of thought whose conclusions he disputes. Third, I have already suggested that it is of major importance to pin down as closely as possible the questions to which he seeks answers. If we can delimit precisely the doctrines on which he takes issue with other theorists, we shall be in a better position to identify these questions and to move toward a reconstruction of the project to which he had set himself. For these reasons, section I of this paper is devoted to a study of the polemical arguments; it is not intended as a complete analysis or commentary, but is mainly aimed at the identification of Theophrastus' opponents, and of the precise nature of the issues on which their positions are challenged.

I

The opening lines of the fragment (61.22–62.1), and particularly the first sentence, are crucial for a reconstruction of Theophrastus' own views, and I offer some remarks about its details in section II. It serves also to announce, in general terms, the position that he refutes, that differences of musical pitch, high and low, are to be analyzed as *quantitative* distinctions. Since a melody is a series of different pitches, and since pitches differ, on this thesis, in a quantitative manner, music itself consists in quantities and relations between quantities. Both the difference between one melody and another, and the difference between a melody and a series of sounds that is not melodic, are differences to be expressed and understood as differences of quantity *en posotēti tēn mousikēn einai* (61.30–62.1).

The introductory sentences also mention one particular form of quantitative analysis and expression, that which makes musical intervals correspond to numerical ratios. The fundamental correspondences are octave 2:1, fifth 3:2, fourth 4:3. These ratios are of course familiar; the equivalences mentioned appear in the most elementary propositions of the kind of harmonic analysis known to the later tradition as Pythagorean.⁴ According to this style of analysis, different notes or pitches are to be conceived as quantities differing in magnitude, and intervals as ratios between such quantities. But analyses of this sort were not the exclusive preserve of Pythagoreans properly so called. They were also used by Plato, Aristotle, and by many Peripatetic

and eclectic writers on harmonic and acoustic theory.⁵ Such writings are not all of a piece; they have a variety of different conceptual bases and are presented in the pursuit of several different species of investigation. We need to know whether Theophrastus' arguments are directed against all quantitative analyses indiscriminately or only against some, whether he brings different kinds of consideration to bear on different forms of such analysis, and whether it is every aspect of quantitative acoustic science or only certain of its phases—certain special areas of assumption and hypothesis—that have attracted his hostility. To try to answer these questions we must turn to the polemical arguments themselves, which run from 62.3 to 65.3. There is a division, whose status we have to investigate, at 62.33, and another at 64.8: a more fundamental shift of topic occurs at 64.24. The objectives of this final section of polemic (64.24–65.3) and its relation to what goes before are dealt with at the end of this section; I begin by investigating the closer and more intricate relations between the arguments of 62.3–64.24.

The first stretch of argument is itself presented in two phases, with a division at 62.10. The task of identifying its target or targets requires us to decide whether or not a new school of thought is introduced for consideration at this point, and also, more broadly, whether the focus shifts to a new target at the beginning of the next page (63.1). If it does not, it must be possible to construe 62.3–33, or at least its latter part, as concerned with the same issues as those to which the sequel is devoted.

In an earlier version of this paper I argued that the whole of 62.3–33 is directed specifically against the Pythagorean position that notes are simply numbers and nothing else, or that differences of pitch are differences of pure number, not number of any other variable. Since this is plainly not true of 63.1–64.24, I suggested that the latter passage picks up the different view that pitched sounds are quantitative determinations of some specific variable (e.g., velocities of movement of the air), and that there is therefore a clear shift of the focus of Theophrastus' arguments at the end of 62. The later arguments are concerned, on this interpretation, with the attempts made in the fourth century by acoustic scientists in the Lyceum and elsewhere to relate the pitches of sounds to quantitative determinations of some physical determinable. They will then form a natural sequel to the arguments of 62: having shown that notes are not numbers and that pitch is not pure quantity, Theophrastus proceeds to show that the analysis of pitch as a quantitative determination of a specific variable is equally misguided.

Discussions of details relating to this interpretation have proved most valuable;⁶ and though I have found no one prepared to dispute the overall diagnosis of Theophrastus' strategy, I am now convinced that it was wrong. To begin with, it takes no account of the apparent change of direction at

62.10. It presupposes that Theophrastus is aiming his attack at a single, precisely distinguishable school of thought. But at 62.10, after refuting one species of quantitative theory, he apparently offers his opponents another. If the first is a Pythagorean "pure number" theory like that discussed by Aristotle at, e.g., *Metaph.* 985b23 ff., then the second is not.

There must be doubts, however, even about the first. It is introduced in very general terms, "if the difference (between musical notes) is a quantity . . ." (62.3-4), giving no sign that it identifies any one special school of quantitative theorists. It then argues that if the difference is a quantity, this difference will arise wherever there are differences of quantity, even, for instance, where two color-patches are quantitatively unequal. If intervals are differences of quantity, and if melody is constituted out of notes differing in pitch, then melody will be what it is "because it is number, but if it is nothing but number, everything numerable will participate in melody to the extent that it does in number" (62.9-10). It seems clear that this argument cuts only against those who treat difference of pitch as difference of number or quantity without specifying what the numbers are numbers of. That has a Pythagorean ring, and so does the thesis that melody is "nothing but number." But this is not a thesis that Theophrastus attributes to his opponents at the start as a deliberate part of their doctrine; on the contrary, it is part of the absurdity that his argument forces on them. It is not that they explicitly and intentionally adopt a "pure" Pythagoreanism, but rather that their position unintentionally commits them to something of that sort, with all its awkward and ridiculous consequences.

Theophrastus' way of specifying the view he attacks—that the difference between musical pitches is a difference of quantity—suggests very strongly that his argument is directed against *all* those who analyze pitch in quantitative terms. The fact that his opening salvo would disturb rather few of them need not invalidate this interpretation. Harmonic and acoustic theorists who used the terminology of quantities and ratios to express pitch and interval were not always, perhaps, perfectly clear about the nature of the quantities they were purporting to measure. Part of Theophrastus' task is to pin them down to a definite position. Suppose first, he suggests, that when there are two sounds of different pitch, the only relevant difference between them is a difference of quantity or number; then to conceive two notes as differing in pitch is just to conceive them as differing in number, and in that case difference of pitch is difference of number only. Hence anything that displays numerical difference displays difference of pitch; and absurd consequences follow. But at this point the opponent protests at the position being foisted on him. Of course the relevant numbers must be attached to sounds, not to anything else; it is patent nonsense to identify notes with pure numbers and quantities. Pitches are quantitative attributes of things of just one special

kind, and melodies are formed from quantitatively different instances of *sound*, not from different quantities as such.

This, then, constitutes the new position to which Theophrastus turns at 62.10. It is not intended to represent the doctrines of a second, deliberately distinguished school of theory, any more than the first argument was aimed exclusively at Pythagoreans; it arises from a second attempt to offer quantitative theorists in general an explicit analysis by which they will be prepared to stand. "Perhaps then," he says, "quantity is in notes in the way that it is in color, as being in something other (than itself). A note (*phthongos*) is one thing and the quantity associated with it another" (62.10–12). As the argument proceeds, his terminology becomes rather more general: the distinction to be drawn is that between something's being a sound (*phōnē*) and its being characterized by a certain quantity. He is therefore drawing on his opponent's admission that a pitched sound is not "nothing but a number": being a sound is different from being a number, but a pitched sound is a sound that has attached to it a numerically expressible attribute. Hence the pitch can be represented as a number, a number characterizing a sound.

Against this hypothesis Theophrastus offers an argument in the form of a dilemma. If the distinction between a sound and the associated quantity stands, then difference of pitch must consist either in differences between sounds as such, considered independently of their quantities, or in differences between the quantities themselves. In the former case (which Theophrastus considers second, 62.21–30), pitch and quantity are independent, and the quantitative theorist's analysis plainly fails. Only the second possibility will help him, but this, so it is argued, is incoherent. If the difference between a higher and a lower note consists in the difference between the quantities attached to them then what, Theophrastus asks, can be the character specific to sound? "For every sound impresses itself on us either as high or as low, since every sound is higher than some other and lower than some other. Thus it is smaller in quantity than the one, greater than the other, and hence is a number. And if this (the number) is taken away, what is it that is left to make it a sound?" (62.16–19).

This is a better argument than it looks. It turns on the contention that any sound, simply as such, already has some definite pitch. We can properly ignore objections based on the fact that some actual sounds (semitechnically designated as noises) cannot be assigned pitch in the way that musical notes can, since plainly a pitched sound is not a noise with some further feature attached. Noises are sounds bearing a confused multiplicity of pitches, not sounds with no pitch whatever. To be a sound, then, is *inter alia* to have a pitch or pitches; hence pitch cannot be a quantitative determination of something that is already fully constituted as a sound. Having pitch is an

essential attribute of anything that is an instance of sound; if it has no pitch it is not a sound at all. Sound is not a pitchless material on which pitches can be imposed by quantitative manipulations.

But perhaps something else is. Many Greek theorists correlated pitch with the velocity of a movement of the air. Modern physicists associate it with frequency of vibration in a medium. Theophrastus must take himself to have shown that pitch is not identical with the velocity of propagation of a sound, since the sound propagated is at least conceptually distinguishable from its velocity, but not from its pitch. But why should not pitch depend on a quantitative determination of something other than sound, such as the velocity of transmission of a movement of the air? If being a movement of air is not identical with being a sound, the arguments mounted so far will get no grip. Something can be a movement of the air without being a sound, and hence without having a pitch. What gives it a pitch, it may be argued, and so converts it into a sound, is its having a certain velocity.

Theophrastus' next sentence (62.19–21), I think, answers this suggestion directly, though it is enigmatically expressed and the text is in some doubt.⁷ I read *ei [phōnē] d'* at the beginning, and replace Düring's full stop in line 20 with a comma. The sense then seems to be: "And if it is higher or lower than some other, a sound possesses quantity, while if it possesses anything else it will no longer be a sound." We may tentatively expand this crabbed utterance to give the following train of argument. Assume that a sound's pitch consists in its quantity. It has been established that every sound, simply as such, must have a pitch (or pitches). Then if a given sound is higher or lower than some other (as it must be), it thereby possesses quantity (again, by virtue of being a sound), whereas if it possesses anything else instead (i.e., if it has any other attribute you like, but not pitch), it is not a sound.

The conclusion has two aspects. One is that pitch cannot be a quantitative attribute attached to something that is already constituted as a sound. The other, equally important, is that anything that does not have a pitch is not a sound, and hence that no attribute attached to such a thing, whether quantitative or qualitative, can be pitch. This may sound trivial, but it is not insignificant in its context. It entails that no analysis of an attribute attached to something other than a sound, e.g., to a movement of air, can count as an analysis of pitch. It has already been shown that a sound's pitch cannot be identified with a quantity attached to the sound, for instance with the velocity of its propagation; the present argument shows that it cannot be identified, either, with the velocity of a movement of air or with any other such variable. The point is in the end a simple one. If the quantitative attributes are attached to sound, they are not pitches, since

sounds already are pitched. If they are attached to anything else, they are not pitches, since only sounds have pitch.⁸

To return to the question of the target of Theophrastus' attack in 62.3–33, it is clear that there are no grounds for restricting it, or any part of it, to a special Pythagorean doctrine. The arguments constitute an a priori dialectical assault on quantitative analyses of pitch in general. That the focus of the arguments shifts from time to time is not because Theophrastus is turning his fire on distinguishable schools of thought but because he is offering alternative ways of interpreting the original, imprecise slogan that musical differences are differences of quantity. He argues that any theory adopting this slogan as its basis must be in error, whether it conceives differences of pitch as differences of quantity as such, as differences of quantity attached specifically to sounds, or as differences of quantity attached to any other kind of variable.

The hypothesis that it is the Pythagoreans who hold the center of the stage in 62 is also committed to saying that the limelight shifts at 63.1. Here, so that hypothesis has it, Theophrastus turns to discuss the Peripatetics and other theorists who associate pitch with quantitative determinations of some specific determinable. But in the first place, if they are now his target, this does not in fact constitute a change of direction. As we have seen, the arguments in the latter part of 62 are designed to rebut just such theories, whether they analyze pitch as a quantity attached to sound or as a quantity attached to something else. Further, there is no sign at this point that Theophrastus has a new set of opponents in mind. On the contrary, the subsequent group of arguments is introduced by the phrase *dēlon d'ek tēs bias . . .* (63.1), which can hardly mean anything but, "This (what I have just been saying) is clear from the force. . . ." The argument that follows is designed to show that higher pitches are not correlated with greater quantities of force or power. Similarly, at 64.8 the new paragraph begins *dēlon de kai ek tōn organōn*, "It is also clear from (facts about) instruments." These signals suggest that no new position has been introduced for rebuttal at 63.1 (as certainly none has been introduced at 64.8), but that new facts are being presented as further evidence against the original position, the one attacked in the arguments of 62.

There are strong grounds, then, for proposing an alternative hypothesis about Theophrastus' strategy. It will construe the whole of 62.3–64.24, at least, as a sustained assault on a single position, perhaps rather vaguely or variously conceived by its exponents. It can be summed up by saying that difference of pitch is difference of quantity. The first page of argument is a direct, frontal attack; the remainder, in its two sections (63.1 ff. and 64.8 ff.), offers supporting considerations of a less direct sort, each group

introduced by the formula *dēlon d'ek*. We must therefore consider next the way in which these supporting arguments are intended to work.

Theophrastus' interest in the arguments of 62 concerns the analysis of the phenomenon of pitch itself, not that of the causal conditions on which the production of pitched sounds depends. Plainly, the theory that pitch differences are *causally correlated* with quantitative variations in some determinable other than sound could not be dismissed in the way set out at 62.20–1. Then if the target of his investigations has not altered, the same should be true of 63–4: issues about the causation of pitched sounds should be, at the most, subordinated to ones concerning the analysis of the attribute of pitch.

However, at least some of the theories discussed and criticized in 63–4 are causal hypotheses. In particular, the question from which Theophrastus begins, and on which he focuses most attention, is whether the production of a higher note requires the exercise of greater force or power on the part of the agent; he argues that it does not. The position attacked is not, in itself, an analysis of pitch; it is a theory about the causal conditions under which higher and lower notes are produced. The exercise of greater force by the agent cannot be conceived as identical with the note produced, or with its pitch.

Not all the theses rebutted in 63–4 have the look of causal theories. At 63.19–20, for instance, Theophrastus rebuts the suggestion that the higher note “is moved in respect of greater numbers,”⁹ not that its cause is something to which a greater number is attached. At 63.31 he rejects the view that a higher note is more powerful. Similarly, he argues at 64.20 that “a higher note is not distinguished by greater speed,” not merely that its cause—e.g., a movement of the air—is not something with greater velocity. It is also the case that two of the three recurrent verbal formulae in which the theories attacked are encapsulated have appeared already in the course of the arguments of 62, where causal questions are not even tangentially involved. Thus the thesis that a higher note “is moved in respect of greater numbers” (*pleious kineisthai arithmous*) which is rebutted at 63.19 ff. and 64.19 ff., is already said to have failed at 62.31–2, and so too is the doctrine that a higher note “is constituted out of more (elements)” (*ek pleionōn synestēken*), which seems to reappear at 63.22 in the formula *dia to plēthos ginesthai*.

These indications support the view that Theophrastus' principal target remains the same throughout, and the focus of his interest can be delineated rather precisely. Sound, specifically pitched sound, is something that can be heard. The conditions under which pitches vary can be described, and acoustic scientists of the fourth century offered a number of ways of describing them. But in so far as these descriptions identify the physical causes of sounds and their varying pitches rather than analyzing the nature of pitch-variation

as an auditory phenomenon, Theophrastus is interested in them only indirectly. We hear sounds as differing in pitch—some higher, some lower. Theophrastus' question is whether pitch, as a property attached to heard sounds, is or is not a quantitative attribute; whether audible pitch-variation is causally correlated in a systematic way with quantitative variation in something else (e.g., movements of the air) is a different question, which would concern Theophrastus, I am suggesting, only in so far as it bears upon the first question. In his approach to the matter he is thus substantially removed from such Peripatetic writers as the authors of the eleventh book of *Problemata* or the *De audibilibus*; but he has something in common with Aristoxenus, who treats issues about the causal conditions responsible for pitch-variation as irrelevant to the way in which such variations are properly to be described (e.g., *Elementa harmonica* 9.2–11, 12.4–34). Theophrastus is thus closer in his concerns to the specialist musicological writers than to the physicists. He is in this respect perhaps more accommodating than Aristoxenus, since he seems to think that the two species of question are at least related. Answers to the causal question can shed light on the analytic one, though not, perhaps, by direct implication or entailment. If this reading of the passage is to be sustained, it should be possible to give some account of how it is, on Theophrastus' view, that the study of causes has a bearing on the analytical issue. Alternatively, perhaps, he has no clear idea of the relations involved, or introduces causal questions merely because they are there, rather than systematically harnessing them to his major project.

The discussion of 63–4 begins with an argument designed to refute the Archytan thesis¹⁰ that the production of a higher note requires greater force than the production of a lower. The theory, as we have said, is a causal one: the note heard, or its pitch, is not identical with the force applied. But Theophrastus certainly intends to generate from his criticism of it a conclusion about the nature of the sounds themselves. He shows that while a higher note demands more force in certain respects, it requires less in others. Specifically, for instance, a string producing a higher pitch is tenser, but also thinner: what is thinner and hence smaller is moved with less force, while what is tenser demands more. Thus “to the extent to which the tension of the thinner string is more vigorous (*eutonôtera*), to the same extent the string that seems more relaxed is thicker. And hence, to the extent to which the sound from the thinner is stronger, to the same extent the other sound is heavier. For from the larger comes the greater sound, one that goes all about” (63.12–15). The gist of the argument seems to be this: Sound has as its cause the movement of objects. Greater force may be needed to move different objects for any of several reasons, notably because they are larger, or more tense, or stiff. Since higher notes require the movement of tenser but smaller objects while lower notes require that of more relaxed but larger

objects, the force required for the production of each is the same. But now (at the word *hence* [*houtō*], which evidently marks an inference, not a mere repetition) the conclusion is transferred from the cause (i.e., the force applied) to the effect (i.e., the sound). In the second sentence quoted above it is the sound (*ēchos*), not the force in the agent, that is qualified as "stronger" when produced by thinner strings, "heavier" when produced by more relaxed ones. (It seems clear that *baryteros* here means "heavier" rather than "deeper in pitch," though that is implied. There would be no point here in the admittedly true conclusion that the pitch given by the slacker string is lower; in any case, greater "size" is explicitly attributed to this sound in the third sentence.)

That this is the pattern of reasoning involved in the general run of Theophrastus' arguments is well brought out by a sentence in his final summary. Notes of different pitches do not differ from one another in quantity, "for low notes turn out to be equal to high ones in different respects (*kat'allo*), in accordance with the way in which the labor involved, too, is equal in opposite ways (*isos kata tounantion*)" (65.10-11). The causal factors and the effort involved in their activity are clearly distinguished from the sounds they produce. The argument is—quantitative aspects of notes of different pitches form an equality, i.e. various different quantitative dimensions are being balanced and equalized, *because* this is true also of the labor (*ponos*) or force (*dynamis, bia*) involved in their causation.

I shall press this account of the overall structure of the argument into service later, in an attempt to explicate some of the difficulties of detail. But first, we need to get a view of the nature of these difficulties, in a passage that bristles with complications. Let us leave on one side for the moment the causal hypothesis that higher pitch is correlated with greater force of impulse. The passage introduces references to what seem to be several other theories, relating more directly to the analysis of pitch. At the least, Theophrastus uses several distinct verbal formulas to designate the position or positions he is attacking. It seems clear that he thinks of these targets as standing in some fairly close relations to one another; they are not entirely independent. Hence we must seek to establish not only what they are but also what he takes the connections between them to be.

There appear to be three classes of formula, which might represent three classes of theory. According to the first formula (F1), a higher note (*pleious kineitai arithmous*) "is moved in respect of greater numbers" (63.19-20, 63.33-64.1, 64.5, 18, and in the preceding argument at 62.15 and 31-2). The second (F2) says that a higher note differs from a lower in virtue of its greater velocity (64.20, and probably also 63.21-2, where the phrase is *dia tēn tēs kinēseōs oxytēta*). The third (F3) makes reference in one way or another to "numerousness" (*plēthos*). At 63.22 we have the phrase *dia to*

plēthos ginesthai, at 64.4 *dia to en autōi plēthos*: in the earlier argument there is a series of references to *plēthos* at 62.12 ff., and at 62.31 a reference to the thesis that a high note "is constituted from more numerous (elements)" (*ek pleionōn synestēken*). Loosely associated with the same group, perhaps, is the thesis dismissed at 63.32–3, that some items, e.g., some colors, are more readily perceptible than others, because the latter "are less what they naturally are." It is unclear, initially at least, how far the instances collected here under the heading of F3 form a unified group.

To begin with the simplest case, F2, I have mentioned two instances, but only one unambiguously refers to velocity. There the general sense is clear: what is designated is the theory that higher pitch is, or is correlated with, the greater velocity of a sound's transmission, since the argument against it involves saying that the higher sound will then reach the hearing in advance of the lower (64.20–1). Such theories were of course well known: in one variant or another they seem to have predominated in the acoustic researches of the fourth century, beginning with Archytas and Plato, and continuing through much of the work of the Lyceum.¹¹ The other instance that I have grouped under F2 refers to the *oxytēs* of a movement. This is perfectly good Greek for "swiftness," and there are no contrary indications in the context, but it remains possible that Theophrastus has something slightly different in mind. Movements may perhaps be sharper, more penetrating, without necessarily being more swift.¹² It cannot, however, be a reference to the shape of a movement, since the *oxytēs* theory is one that Theophrastus attacks, whereas theories of shape receive at least a qualified endorsement (64.5–7). I shall return to the passage later, in the contexts of F1 and F3. For the present it remains to note that the velocity theory at 64.20 seems to be distinguished from something expressed in terms of F1 (64.18), while the theory of *oxytēs* at 63.21–2 seems to be subsumed under F1 (63.19–20) and distinguished from an F3 theory (63.22). This again raises difficulties to which we must come back.

In F3 the key term is *plēthos*, but the word may have various uses, and there are signs that the instances I have collected do not form a homogeneous group. When the term is first introduced (62.8, but more importantly 62.11 ff.), Theophrastus seems to be talking about quantitative theories quite generally, without intending to point our attention at any specific kind. He has dismissed the theory that differences of pitch simply are numbers (*arithmoi*) or quantities (*posotētes*) and wishes to consider the suggestion that "a note is one thing and the quantity (*plēthos*) attached to it another" (62.11–12). The argument that follows is dialectical and conceptual; it deals with the question whether differences of pitch can properly be conceived as quantitative differences of any sort, not with one specific form of quantitative analysis. Down to 62.30, then, references to the correlation of

pitch with *plēthos* are to be understood as references to quantitative analyses in general: *plēthos* is simply "quantity."

At 62.31 we meet the theory that a higher note *ek pleionōn synestēken*. It is apparently distinguished from the thesis that the higher note *pleious arithmous kineitai*, an F1 theory. Both are said to have been refuted by the preceding argument, a further indication of the generality of the notion of *plēthos* involved at that stage. (Note that at 62.14–15 a *plēthos* formulation seems to be treated as interchangeable with or equivalent to a case of F1; see below.) Even in advance of any study of F1, something can be made of the disjunction at 62.31–2. The F3 theory relates a note's pitch to the number of elements from which it is constituted—the F1 theory relates it to a number associated with its movement. Supposing that it is intended as a genuine disjunction (but *ē*, "or," just might mean "or in other words," "i.e."), there seems to be no initial difficulty in making sense of it; the number of elements from which a thing is composed may be treated quite intelligibly as independent of any quantitative variations in the way it moves. Further, there is evidence in the Greek sources of the existence of a theory quite distinct from the popular velocity hypothesis, linking higher pitch with greater frequency of impact. Sounds, even when apparently continuous, are in fact composed of discrete impulses: higher sounds are those in which the impulses are more frequent, more closely packed together. The theory is explicit in the introduction to the Euclidean *Sectio canonis*; aspects of it, though not the complete theory, can be found in the Peripatetic *De audibilibus* and in a passage quoted by Porphyry from a certain Heraclides. Something comparable is involved in some of the Aristotelean *Problemata*.¹³

The hypothesis is one that could quite fairly be summed up as a theory of *plēthos*—"multitude" or "numerousness." Certainly the one reference to *plēthos* in the arguments of 63 seems to have a more specific intent than do those of 62.11 ff. Here the alleged fact that a higher note comes about *dia to plēthos* is treated as the basis for a putative explanation of a higher note's being audible at a greater distance, and the F2 thesis that it travels further *dia tēn tēs kinēseōs oxytēta* is a rival, alternative explanation. (Both are of course rejected.) It seems natural to interpret the difference between them as that between an account linking pitch with velocity of movement and one linking it with numerousness of elements, that is, numerousness or frequency of impacts, as in the *Sectio canonis*.¹⁴

There are complications here parallel to those I have mentioned in relation to F2. At 64.20 an F2 theory is apparently distinguished from an F1 theory, whereas at 63.21 it seems to be treated, in the context of 63.19, as simply a special form of a theory of the F1 type. But in that case so too is the current instance of an F3 theory; yet at 62.31–2, F3 theories and F1 theories were apparently alternatives. A similar puzzle is raised by one of the two

remaining occurrences of F3, at 64.4; F1 appears in the following line, and Theophrastus seems to be treating them as equivalent. If these difficulties can be resolved at all, they must in any case wait until we have examined the various occurrences of F1.

With F3 I also associated a phrase at 63.32–3, where Theophrastus denies that one color is less readily perceptible than another “by being less what it naturally is.”¹⁵ Some background must be filled in to clarify the connection that I have in mind. Suppose that a higher sound is produced by more frequent impacts of a body on the air, and our hearing of it by more frequent impacts of the air on our ear. Now this is plainly a causal theory: a higher pitched sound cannot be analyzed as one composed of more frequent *sounds*, or at any rate not if being a sound already involves having definite pitch, as Theophrastus has argued (62.16 ff.). The attribute of high pitch as attached to sound cannot be identical with the attribute of frequent occurrence. If each impact counts as a sound in its own right, pitch must depend on something other than frequency of occurrence. Hence in Porphyry’s Heraclides fragment, and (*pace* Gottschalk) in the *De audibilibus*, higher pitched sounds do as a matter of fact impinge on the ear with more frequent impacts, but the pitch depends on velocity, not frequency. Only the *Sectio* is prepared to insist on making pitch vary as the result of variations in frequency, and hence implicitly to deny that a single impact constitutes a (pitched) sound. Only the *Sectio*, then, offers a clear instance of the *plēthos* theory of pitch.

But a *plēthos* theory of this causal sort is not directly in Theophrastus’ target area. He is concerned with the question of what high and low pitch are, as attached to sounds. The theory that high pitch is correlated with greater frequency of something other than sound—here, impacts of the air—is simply not an analysis of pitch but a hypothesis about the causes of sounds of different pitches. We have seen that causal hypotheses have a subsidiary claim on Theophrastus’ attention, but the only comparable theory that would require a direct attack would be one *analyzing*, absurdly enough, higher pitch of sound as more frequent occurrence of sound. Such a theory could be described as one according to which a higher pitched sound is “more of what it naturally is” and a lower one “less of what it naturally is,” in the sense that in an instance of the former there are more sounds, in an instance of the latter fewer. Again, each elementary sound, to be a sound at all, must have a pitch, and presumably each has the pitch of the sound of which it is a part. Hence the more “elements” a sound of given pitch has, the more it is of what it is. The theory is of course nonsensical, and I know of no evidence that it was ever seriously held. It occurred to Theophrastus, no doubt, as an analysis correlative to the causal *plēthos* theory:

as a hypothesis distinct from the others he gives it only passing and derisive notice.

We come, finally, to F1. The expression *pleious arithmous kineitai* ("is moved in respect of greater numbers") is scarcely transparent, and I have seen no commentary that makes any sense of it. (Düring evades the difficulty. His German translation consistently renders the phrase in terms meaning "requires greater numbers," and he glosses this in a footnote¹⁶ as meaning "is expressed in terms of greater numbers." He thus gives no translation of the verb *kineisthai*, and ignores the major puzzle, what it is about the movement that is expressed in numerical terms.) Theophrastus' handling of the expression in the course of his arguments compounds the obscurity. At 62.31–2 the F1 hypothesis is disjoined from the F3 theory that a higher note is constituted out of more elements; at 64.18–20 it is apparently distinct from the F2 velocity hypothesis. We have concluded that F2 and F3 theories are distinct. Hence F1 should designate a third, independent form of analysis. But at 63.19 ff. F2 and F3 theories seem to be treated as versions or instances of the F1 theory; an argument against the latter is constructed by a joint attack on the former two. Again, at 64.4–5 Theophrastus seems to intend no distinction between F1 and F3, and at 62.14–16 they are all but explicitly identified with one another.

These difficulties apart, a search through the Greek sources for yet another independent quantitative account of pitch, capable of fitting the F1 designation, would, I am certain, be fruitless. No such thing exists. We must try to find clues to the sense and function of the formula from within the Theophrastean fragment itself. As to its sense, it seems vague in one respect but rather specific in another. Considered merely as a self-contained phrase, it gives no indication of what the numbers attached to movement might be numbers of. The obvious suggestion is that they are numbers measuring velocity, but Theophrastus cannot intend the phrase to mean "moves more swiftly," in view of the contrast between F1 and F2 theories signalled at 64.18–20. On the other hand the numbers are at least specified as numbers characterizing movement, and this, as we saw, makes sense of the contrast between F1 and F3 theories at 62.31–2.

The discussion of force (*bia, dynamis*) at 63.1 ff. is designed to show that various different factors affecting the force needed to produce a note are balanced out in such a way that the force required remains constant, whether the pitch of the note is high or low. (Theophrastus would concede that different amounts of force *can* be applied; he would presumably think of these as affecting the volume of a sound rather than its pitch.) The purpose of this exercise, it turns out, is to generate from evidence about the force applied by the agent a conclusion about the pitches themselves. Since the quantity of force required to produce sounds of different pitches

does not vary with the pitch involved, the pitches themselves cannot be quantitative attributes of the sounds. Quantities of force can, in principle, be designated by numbers, and the number attaching to the force required to produce a given note will, on Theophrastus' view, be a function of, e.g., the tension of a string together with its thickness. If, then, the sound produced by a string is (or is associated with) a movement, the quantitative characteristics of this movement will depend both on the thickness of the string and on its tension. As Theophrastus says, the sound from a thinner string will be stronger (in correspondence with the string's greater tension), but that from a slacker string will be heavier. A little later he expresses his conclusion by saying that a higher and a lower note that form a *symphonia* (a concord) must have equal powers or forces (*dynameis*, 63.29–30). Plainly, the conclusion about causes has been transferred to the effects; the sounds themselves are described as quantitatively equal. The variable that is equalized, in the sounds as in the causative agents, is designated as *dynamis*; it is the same variable on both sides of the cause-effect division, transmitted directly from one to the other. Hence from equality of *dynamis* in the cause, equality of *dynamis* in the effect (according to Theophrastus' assumptions here) can properly be inferred.

Again, in the effect as in the cause, the equality is manifested in the balancing out of distinct factors, these being (in the case of sounds produced by strings) on the one hand the vigor or strength transmitted by the tension of the string, on the other the bulk or weight of what is moved, the amount moved corresponding to the thickness of the propelling agency. (The *dynamis* of a note must therefore be distinguished from its strength, in the sense in which the note from a tenser string is said to be stronger.) Theophrastus seems to be approaching a conception close to that of "momentum"—a quantitative characteristic of a thing's movement that varies both with its bulk and with the vigor of the impulse initiating the movement. Since the momenta or powers of two different sounds can be measured against one another and found to be equal, this momentum is evidently conceived as a single variable, though rooted in a plurality of others, and like the force attached to the moving cause, it could be represented on a linear scale. Any given movement could then be assigned a single number, corresponding to the degree of momentum it possesses.

When Theophrastus talks about a higher note being "moved in respect of greater numbers," it is, I suggest, a conception of this sort that he has in mind. A sound's movement is measurable on a single scale representing its *dynamis*, sounds with greater *dynamis* being assigned higher numbers, and this *dynamis* or momentum is itself a function of several kinds of variable taken together.

That Theophrastus relies on this conception of *dynamis* in at least some parts of 63-4 is not a matter for serious doubt. To elucidate his phrase "is moved in respect of greater numbers" by reference to this *dynamis* is riskier, but such an interpretation allows us to resolve most of the difficulties associated with Theophrastus' uses of the phrase. In the first place, the vagueness and generality of the expression are explained. Theophrastus is not talking specifically about velocity, about the bulk of the object moved, or about the frequency with which successive impacts follow one another, but about a variable to whose value, in any given case, all these factors may be conceived as contributing. But he might intelligibly suppose that in the refutation of this compound F1 theory the refutation of more specific versions is also implied. Thus if pitch is held to depend on velocity, other factors being irrelevant, pitch will be raised by increasing velocity even if the other factors are held constant. In that case, momentum will be increased too, and the refutation of a momentum theory will refute the velocity theory as well. If the theorist accepts Theophrastus' demonstration that momentum remains unchanged, but seeks to cling to a velocity hypothesis nevertheless, he will be forced to agree that while velocity is increased to produce higher pitch, bulk, or some similar variable, is simultaneously diminished, so that pitch is not after all a function of velocity alone, but of velocity together with bulk. Then, again, the relevant quantity will be equalized in notes of different pitch.¹⁷

This explains why Theophrastus can treat the F2 velocity theory as a special case of the F1 hypothesis at 63.18 ff. In the same passage the F3 theory of *plēthos* appears as another special case of F1; and the reason will be the same, if we can assume that increase in *plēthos*, namely in the number of constituent parts, is tantamount to an increase in bulk, or in any other variable that needs greater force (*dynamis*) to increase it, and thus contributes to an increase in the transferred *dynamis* or momentum. The assumption might very plausibly be questioned, but it is nevertheless clear that Theophrastus makes it. He does conceive an F3 theorist as committed to treating increased *plēthos* as involving increased momentum. This is shown by the nature of the fact which the theory, he suggests, is supposed to explain—that a higher sound is heard at a greater distance (63.20 ff.). He assumes that the explanation depends on the thesis that a higher note is more powerful (*sphodroteros*, 63.26) and can therefore travel further (63.26-7); a *plēthos* theory of pitch will have no such implication unless increased *plēthos* contributes to increased momentum. I know of no evidence that *plēthos* theorists (if I identified them correctly in my discussion of F3 above) in fact used their hypothesis in this way, but then we know rather little about them. Velocity theorists certainly did, and so did proponents of nonquantitative hypotheses of a more Theophrastean sort.¹⁸ Probably the capacity

of a higher sound to be heard at a greater distance was among the accepted *phainomena* that any theory would immediately be called upon to explain as a test of its credentials, and if so the *plēthos* theorists would have been unable to ignore it. In that case, so long as their explanation turned on the attribution to the higher note of the capacity actually to *travel* further, Theophrastus' treatment of it seems tolerably well founded.

There remain loose ends to be tied up, in particular (1) the apparent identification of F1 and F3 theories at 62.14–16 and 64.4–5, despite their disjunction at 62.31–2 and perhaps 63.32–64.1, and (2) the distinction between F1 and F2 theories at 64.18–20, despite the treatment of the latter as a special case of the former at 63.19 ff. The two problems can be solved in roughly parallel ways. Taking (2) first, Theophrastus believes, as we saw, that a velocity theory can be caught by arguments against the general class of theories concerned with momentum. But a velocity theory is more specific; it does not deliberately rely on ideas about momentum, which are introduced, if at all, only by implication. Its explicit emphasis is on only one of the factors out of which momentum is compounded. Hence Theophrastus can mount an argument against the dependence of pitch on momentum, broadly and generally conceived, and then add, "But the high note is not distinguished even by greater velocity" (64.20); that is, it is not distinguished by a greater amount of even one of the variables involved in momentum.

Turning to problem (1), theories of *plēthos*, like theories of velocity, are not deliberately and explicitly dependent on hypotheses about momentum, and hence it is proper to treat F1 and F3 theories as distinct, even if the same argument may sometimes serve against both. There is, moreover, a special reason for distinguishing them, since F1 theories offer analyses specifically in terms of movement, while F3 theories concern themselves with the number of elements in an item's constitution. If Theophrastus believed that the arguments mounted at 62.11 ff. and 63.19 ff. are capable of refuting theories of both types, it was worth his while to say so explicitly. On the other hand, if the arguments work equally against both because both involve, explicitly or implicitly, the same set of assumptions, and if the arguments show that it is these assumptions that are mistaken, it makes no difference which formula is used to designate the theory that has been refuted. This would explain why the formulas are apparently interchangeable at 64.4–5 and 62.14–15. There is an alternative explanation that fits one of these cases better, and probably both. It is clear that in the early part of 62 the term *plēthos* is used to mean "quantity" quite generally; here a theory relating pitch to *plēthos* is simply a quantitative theory of pitch. It is wildly improbable that *plēthos* at 62.14 means anything more specific, since it directly picks up the references of the preceding lines. Then when Theophrastus says "If (higher and lower notes differ) in *plēthos*, and the

higher is such by being moved in respect of greater numbers" (62.14–15), the implication is simply that any quantitative theory of pitch must either assert or imply the dependence of pitch on quantitative features of *movement*. We have seen that this implication is involved and to some degree justified in the arguments of 63.19 ff. If the reference to *plēthos* at 62.14 must be to quantitative theories in general, the reference at 64.4 may be so too, despite the fact that at 63.22 a similar formula signals a theory of one specific type, as does that at 62.31. The central points of the discussion so far are these: (1) Theophrastus is concerned throughout with the analysis of pitch. Pitch is an attribute of sound, and his intention is to show that it is not a quantitative attribute. He is interested only indirectly in theories associating pitch with quantitative attributes of anything other than sound. All sounds have pitch, and nothing else does; quantitative attributes of something else cannot therefore be identified with pitch. (2) At 62.3–33 Theophrastus offers a set of a priori dialectical arguments against the general project of analyzing the pitches of sounds as quantitative attributes of any sort. The arguments first dismiss, fairly briefly and conclusively, the notion that differences of pitch are differences of quantity *simpliciter*. They then proceed to refute the thesis that pitch is a quantitative determination of sound, and in passing to show that it cannot be a quantitative determination of anything other than sound. It is obvious that he thinks that the most promising of the positions an opponent could adopt is that pitch is a quantitative determination of sound, and in the last lines of 62 he mentions the two classes into one or other of which any such analysis must fall. In one, the quantity depends on the number of a sound's constituents, in the other it is represented by a number characterizing the sound's movement. The dialectical argument is taken to have refuted both. (3) The two following groups of arguments, at 63.1–64.7 and 64.8–24, offer supporting considerations of a new sort, but their target remains the same. They are based on an investigation of the *causes* of sounds of different pitches. Acoustic research in the Lyceum and elsewhere had concentrated on causal issues, and Theophrastus takes care to make reference to all the different varieties of quantitative hypothesis that had been suggested. But he keeps the analysis of causes distinct from that of their effects—the pitched sounds themselves. Descriptions of the causes are not identical with descriptions of the effects. Nevertheless, evidence about the causes can be shown to imply truths about the sounds caused. Theophrastus shows first that the forces required to produce higher and lower notes are dependent on factors of several sorts, and that these factors vary inversely to one another in such a way that the force required in the causative agent always remains constant. It follows, he argues, that the force transmitted to the effect, which becomes an attribute of the sound itself, remains constant too. He calls this force *dynamis* and

I have called it "momentum"; it is the degree of momentum that is represented by the "number" attached to a sound's movement. (4) It remains for Theophrastus to show that any quantitative theory of pitch is committed, whether explicitly or implicitly, to the view that notes of higher pitch have greater momentum. High notes will do so if they have greater velocity without losing bulk, or if they have greater bulk without losing velocity. The general arguments against the correlation of pitch with momentum (63.1–18) show that neither of these can be true, and further arguments are offered at 63.20 ff. and 64.8 ff. against both of them, jointly and separately. If, on the other hand, higher notes involve both greater velocity and decreased bulk, then the number relevant to the description of their movement is once again the momentum number, the number that measures their *dynamis*, and this always remains constant. I have not analyzed in detail the special arguments about concordance, or those about the directionality of sounds, presented in the course of 63–4—all of them can be consistently understood within this framework. (5) In general, we can conclude that Theophrastus is attacking the same target unremittingly from 62.3 to 64.24. The arguments of 62.3–33 are not directed against Pythagorean pure number theory, but against the credentials of quantitative analyses of pitch taken as a class. The arguments of 63–4 are not aimed at theories identifying pitched sounds with quantitative determinations of something other than sound; these have been dismissed as absurd at 62.17–21. They continue to focus on a thesis that makes pitch a quantitative attribute of sound (whether one associated with the sound's constitution or with its movement); they seek to show that facts about the quantitative aspects of the *causes* of sounds, which are "things other than sounds," demonstrate that there is no correlation between alterations in pitch and in the quantitative attributes transmitted from the cause into the effect. Hence, again, alterations of pitch are not alterations of quantity.

Theophrastus draws his arguments against quantitative theories to a close with a relatively brief attack on a position quite distinct from those so far considered. Up to this point it has been assumed that quantitative analyses of the pitch-differences involved in melody assign a number, on one basis or another, to each specific pitch, and treat differences of pitch as relations—ratios—between such numbers. But another approach is possible. Notes may be represented not as quantities but as points or positions on a continuous "scale" of pitch. Pitch-differences will then appear as longer or shorter distances on this continuum, and may therefore be quantified without any implication that one pitch is itself a different quantity from another. Theophrastus makes it clear at the outset that the crucial assumption of all the approaches he attacks is that *differences* between pitches can be represented quantitatively (62.1, 4, 8). The arguments we have been investigating are

directed only against theories that ground this thesis in quantitative descriptions of the notes themselves. Hence it is not surprising that at 64.24 he turns his fire on the alternative form of analysis: "It is not the case, either, that the intervals (*diastēmata*) are the causes (*aitia*) and hence the principles (*archai*) of the differences (between notes)."

In another way, however, this last stretch of polemic is unexpected. In introducing the previous forms of quantitative analysis, Theophrastus has said that their proponents are commonly, but wrongly, treated as *synetōteroi*, as understanding things better than the members of a rival group. The latter are described as "the *harmonikoi* who judge by perception" (62.2), and Theophrastus seems to be expressing a preference for their position. In Greek works on music the expression "the *harmonikoi*" generally designates the empirically minded investigators whom Aristoxenus treats as his immediate predecessors. They appear in a familiar passage of the *Republic* (531a4–b6), though not under this name. Plato gives a brief description of their practices, contrasts them with the Pythagoreans, and ridicules them with heavy-handed jocularity. They are appropriately described as judging by *aisthēsis*, since it was as champions of *aisthēsis* against the mathematicians' claims for reason (*logos*) that they and the Pythagorean ratio-theorists were most commonly compared. Aristoxenus himself may properly be included with them here, in a general way. He too dismisses the independent claims of *logos* and bases his investigations on *aisthēsis* first and foremost. Some later systematizers place him squarely on the opposite side to the Pythagoreans, though their dichotomy is too crude to do justice to either.¹⁹ Certainly there is no doubt that Theophrastus would be on Aristoxenus' side when the latter dismisses the views of those who "reject *aisthēsis* as being inaccurate, inventing 'intelligible' (*noētas*) causes, and saying that it is in certain ratios of numbers and relative velocities that high and low pitch come about" (*El.Harm.* 32.21–26).

It comes as a surprise, then, that at 64.24 Theophrastus should set off to undermine the framework of analysis most characteristic of Aristoxenus and the *harmonikoi* who preceded him. The framework is of the kind outlined above. Notes are no longer conceived as quantities, nor intervals as ratios between quantities. Pitch is a quasi-linear continuum of "up" and "down," with notes appearing as dimensionless points upon it. Intervals are calculated simply as distances between points on the continuum, and notes differ from one another only by position, not by any quantity or quality intrinsic to them. The scheme is the same as that implicit in our everyday modern ways of picturing pitch and melody, reflected graphically in the representation of notes on the musical stave.

It is this conception that Theophrastus now attacks. The gist of his argument is identical with that of Ptolemy, 500 years later (*Harmonica* 19.16

ff. Düring). The difference between higher and lower pitches, Theophrastus argues, cannot lie in the existence of a *diastēma*, a gap or interval, between them. The content of the gap is precisely what must *not* be sounded if the two notes are to appear; the interval is therefore neither a constituent nor a moving cause of the notes themselves, since it must be absent when they are present. What gives a note its pitch—and thereby introduces the differences out of which melody is constituted—must be something intrinsic to the note itself, something that is present and does appear to perception. Whatever it is, it is not the *diastēma*, which is not something we can perceive in the note.

The thought, I think, is clear, and might naturally be supplemented as follows. We can arrange notes in a sequence, separated by Aristoxenian “gaps” of varying sizes, only because they present themselves to us as having different intrinsic natures or characters. We can attend to these perceptible differences and similarities, and order the notes that bear them into a series, with intervals of different sizes between them. But the intervals simply represent degrees of similarity or dissimilarity between intrinsic characters. They do not constitute the characters any more than the distances between temperatures on a scale or colors on the spectrum constitute the attributes whose degrees of difference such distances express. The notion of a musical interval as a quasi-linear distance cannot then be used to explain or analyze the phenomenon of pitch.

The argument is a good one. It is certainly useful for practical purposes to treat the spaces separating one note from another on the analogy with spatial dimensions. But as Theophrastus insists, the elements of melody are notes, not intervals (65.5–6), and a theory that gives no account of the perceptible characters by which different notes are distinguished cannot count as an analysis of these elements. Our conception of musical space is dependent on a prior perception of differences between notes, and it is therefore patently unsatisfactory to analyze pitch-differences as differences of position among dimensionless and characterless inhabitants of that space.

The argument against an analysis in terms of *diastēmata* concludes the polemical part of our passage. It does nothing to undermine the harmonicist and Aristoxenian practice of expressing the relations between notes as distances. All it does, and all Theophrastus wishes to do, is to show that such a procedure offers no credible quantitative analysis of pitch. For most of his purposes, Aristoxenus would probably have been relatively untroubled by these comments, though they suggest that there is something unsatisfactory, or at least incomplete about his account of the movement of the voice at *El.Harm.* 8.13 ff. He is perhaps not offering, or relying on, an analysis of the phenomenon of pitch of precisely the sort that Theophrastus accuses a diastematic theory of being unable to give. From Theophrastus’ point of

view, however, the discussion of such theories completes his present task. He has considered the only classes of theory known in the fourth century which might have provided a basis for the analysis of differences of pitch in quantitative terms. One class attaches quantitative descriptions to the notes themselves, the other to the intervals between them. Neither is capable of sustaining the role that Theophrastus has in mind.

II

We cannot hope to reconstruct in detail the analysis of pitch that Theophrastus would have offered in place of the quantitative accounts that he criticizes. The fragment does not even allow us to infer safely that he had such an analysis to propose, except in the most general terms. It is fair to assume, as Porphyry does (61.12 ff., 65.18–19), that he intended to treat high- and low-pitched sounds as differing in quality, though the fragment does not use the noun *poiotēs*. Theophrastus comes close to a positive assertion in this sense at 62.24–5, where he relates difference in pitch to the *idiotēs* of each of the sounds involved, and compares it to difference of color. Even this is only the hypothetical conclusion of one leg of a dilemma that he offers his opponents, and is not stated as his own deliberate view; at 63.28–30, however, he does commit himself to the thesis that it is through the *idiotēs* of each that high and low notes differ. To construe *idiotēs* as something approaching a synonym for *poiotēs* (with Porphyry at 65.19) seems reasonable.

There is nothing particularly eccentric in a qualitative treatment of pitch. On the contrary, the Greek terms *oxys* and *barys*, standardly corresponding to our *high* and *low*, do not in their normal usage suggest anything about magnitude or velocity, or about position on a continuum of up and down. Neither, so far as I have discovered, do their poetical elaborations in metaphor and simile. No Greek poet draws on notions of size, speed, or height in his images of *oxytēs* and *barytēs* in musical sound. It is the quantitative approaches of the various schools of fourth-century science that demand the introduction of novel conceptual frameworks, and Theophrastus is quite justified in implying that his own standpoint is nearer to the data of perception—i.e., to the way in which the data were standardly apprehended through contemporary conceptual spectacles—than are those of his opponents (62.1–3). The layman's qualitative intuitions were not wholly neglected by philosophers and scientists. Aristotle attempts a sort of phenomenological analysis of them at *De anima* 420a27–b5. The writers of some of the *Problems* also try to use qualitative rather than quantitative conceptions as the basis for their explanations of familiar acoustic facts.²⁰ Porphyry himself—after centuries of quantitative presentation and analysis had done their work on ordinary educated consciousness—finds it appropriate to preface his

discussion of high and low pitch with a paragraph on the other sensory dimensions in which *oxytēs* and *barytēs* are found; they are qualities of the same kind in touch and taste as they are in hearing (60.20 ff.).

If we ask precisely what sort of qualitative distinctions Theophrastus had in mind and how he intended to analyze them, the fragment offers few hints. Theophrastus suggests that the capacity of a high sound to be heard at a greater distance than a low one is due to some special quality (*idiotēs*, 63.30) that enables it to stand out more clearly against its perceptual environment (*dia tēn pros ta perix anomoiotēta*, 64.2). As an alternative, he concedes that the higher note may actually travel further, as his opponents argue, but insists that in this case it is not because of any quantitative difference between high and low notes but because of their difference in shape (*schēma*, 64.5). This second suggestion is elaborated at some length (64.4–19)—high notes are projected with the same force as low ones, but the energy of the former is directed mainly forward (*prosō*), while that of the latter is dispersed in all directions (64.6–7, 15–20). Theophrastus gives evidence for these claims and seems to believe that they are true. In offering two different explanations for the audibility of higher sounds at greater distances, he does not appear to mean that the facts relied on by either explanation are in doubt. But it is important to note that he is not thereby committing himself to any analysis of high and low pitch, or even to an account of their causation. High-pitched sounds travel mainly in one direction and so have a different *schēma* from low ones, but that does not mean that high pitch consists in a certain kind of *schēma*, or that it is caused by a special kind of “shaping” of the air. There is nothing here to suggest that Theophrastus intended to reject an account of sound as due to air in motion in favor of one treating it as air that has taken on a certain *schēma*. What gives the higher sound the capacity to be heard at a greater distance is a fact about the direction of its movement. It is therefore a mistake to infer that Theophrastus is proposing or even expressing allegiance to the theory briefly mentioned at the opening of the *De audibilibus* (800a), according to which sounds arise not as a result of movement of the air but through its being shaped (*schēmatizesthai*).²¹ Theophrastus uses the notion of a sound’s shape only as a way of explaining one peculiar feature of its behavior—different shapes are attributes of sounds of different pitch, but we have no grounds here for assigning to Theophrastus the view that a sound’s pitch is constituted by or causally dependent on its shape, let alone that sound itself is a shaping of some medium.

Theophrastus may have proposed a full-fledged theory whose details are now lost. On the other hand, certain features of the fragment suggest that he would have had no particular interest in working out anything of the kind, at least in this context.²² He does not introduce his opponents’ analyses

in order to conduct an exercise in the science of physical acoustics but because, so he says, they have used their theories to supply answers to a certain specific question. The question is evidently one that Theophrastus finds important, but it is not one that necessarily demands an approach through a scientific or a conceptual study of pitch. Because the theorists he attacks have taken that route in seeking an answer to the question, Theophrastus sets out to show that their analyses are false, but if he intends to answer it himself from a different angle, he has no need to replace the discarded acoustic theories with one of his own.

The terms of the question are explained in the first sentence of the fragment, a sentence that has been misunderstood, I think, by both Düring and Lippman. I shall not tediously pursue their errors here, but merely offer my own translation, adding a few parentheses to clarify the references of the pronouns whose misinterpretation has caused most of the trouble:

The movement productive of melody (*kinēma melōidētikon*) that occurs in the soul is very accurate, whenever it (the soul) wishes to express it (the movement) with the voice. It (the soul) turns it (the voice), and turns it in the manner that it wishes, to the extent that it (the soul) is capable of turning the irrational (voice, *tēn alogon*).²³

Some people, he goes on, have sought to explain this accuracy by reference to numbers. That is why theories associating pitch with number are presented for discussion. Theophrastus' interest in them depends on their supposed capacity to explain the *akribēia* he has mentioned, and it is of this that we can reasonably expect him to give some account of his own. The question is whether he does so in the present fragment.

We cannot answer this question without deciding first how we are to understand the problem that the opening sentence announces. What is to be explained is the "accuracy" with which the soul "turns" the voice, when it wishes to express (*hermēneuein*) through the voice a certain kind of movement that takes place in the soul. We should also bear in mind that it is something of which quantitative theories of pitch might plausibly be thought to give an explanation.

Three kinds of interpretation suggest themselves. First, Theophrastus might be alluding to the fact that if someone thinks of a note or a tune, he can accurately produce with his voice the sounds he has imagined. This is true, more or less, of most people, and a theory associating pitches with numbers might claim to be able to explain it by hypothesizing an internal process of measurement or counting analogous to the method whereby a craftsman creates a "copy" of what he has designed by transferring the measurements of his blue-print to another material medium. It is not

impossible to construe the first sentence of the fragment on these lines. It will involve treating the *kinēma melōidētikōn* as the imagining of a melody, and its expression as no more than the reproduction of the melody in sound; this is perhaps a rather weak sense for *hermēneuein*, which is more like interpreting than copying. However, if this is what Theophrastus was seeking to explain, his explanation has not survived. Nothing in the fragment gives the least indication of the way he might have approached the question.

Second, Theophrastus might have in mind our capacity to distinguish sharply and accurately between a series of pitches that constitutes a melody and one that does not, and to use our voices to produce sequences that are melodic. The problem of articulating the distinctions between melodic and unmelodic sequences was one to which Greek harmonic theorists paid a great deal of attention. Not only Platonists and Pythagoreans, but Aristoxenus and his empirically minded predecessors in their own way as well, characteristically expressed these distinctions in quantitative terms, though it was only the former schools that sought also to justify and explain the laws of melody by reference to those of mathematics. Further, there are some signs toward the end of the fragment (64.27–65.10, especially 65.4–5) that Theophrastus too was concerned with the distinction. But it seems impossible to construe the first sentence in this way. The soul, it says, can express a *kinēma melōidētikōn* with great accuracy through the voice. No doubt this will involve the vocal production of something that is melodic rather than unmelodic, but the words suggest more than this—the production of precisely what the soul wishes to produce—not merely something falling into the melodic rather than the unmelodic class.

This consideration might push us back toward the first view of the passage, but there is a third possibility. Theophrastus is referring to the soul's power of expressing in melody something that occurs originally in the soul itself. But what occurs in the soul—the “movement productive of melody”—need not itself be the imagining of a melody “in the mind's ear”; it might be something of a different order, an emotion, for instance, or some other psychological disposition or activity. In that case we can attribute its full sense to the verb *hermēneuein*, since the process involved is not that of vocally replicating what has been imagined, but of interpreting a condition experienced as feeling or thought in the wholly different “language” of melody. The very end of our fragment makes it likely that it is this sort of “accurate interpreting” that Theophrastus is principally considering. If so, elements of the other two constructions of the opening sentence will also be involved. The singer, in expressing the condition of his soul, must understand the “language” of melody, or at least be able to discriminate between what makes melodic sense and what does not. He must also be able to produce the melody he intends, but more important here, he must

be able to produce a melody of the right sort to represent his psychic state. It is perhaps no accident that Theophrastus' word for "directing" the melody in the appropriate way is *trepein*, literally "to turn," but allied to the noun *tropos*, commonly used in musical sources to mean "style," and often linked with or substituting for *harmonia*. The singer must be able to produce a melody in the right *tropos*. The notion that a particular musical style, and especially a particular melodic genre is related to a particular condition of the soul, is familiar from Plato and many other authors.

Mathematical theorists represented each legitimate form of musical scale as a sequence of numerical relations, either treating notes as quantities and their relations as ratios in the manner of Plato and the Pythagoreans, or treating notes as points on a continuum, separated by quantifiable distances, the method adopted by Aristoxenus and the "harmonicists" who preceded him. Whereas Aristoxenus insisted that the laws of melodic order are autonomous, to be discovered inductively on the basis of perceptual experience and not to be derived from or explained by laws holding in some other field,²⁴ Plato may be understood as demanding that the privileged status of certain ratios and the melodic impropriety of others be explained on the basis of more general laws, belonging to pure mathematics.²⁵

Traces of the search for such explanations can be found in the attempts of Archytas and of Plato himself to generate paradigm scalar forms by the application of fundamental mathematical proportions,²⁶ and again in the special role assigned by the author of the *Sectio canonis*,²⁷ and by other Pythagorean theorists,²⁸ to multiple and epimoric ratios. To proceed from here to a correlation between musical relations and psychic conditions would require, in addition, a quantitative account of the harmonic structure of the soul, and a description of its various states and emotions as different patterns of ratio, each corresponding to the pattern exemplified in an appropriate variety of melodic series. Though no fourth-century source gives a detailed account of this latter sort, a basis for it plainly exists in familiar conceptions of psychological harmony and discord, which philosophers sometimes elaborated in terms of mathematical ratios and proportions,²⁹ as well as in more esoteric identifications of the soul itself with a *harmonia*,³⁰ or in Plato's mathematical/musical analysis of the world-soul in the *Timaeus*.³¹ A mathematical interpretation of the canonical correlations of *harmoniai* with specific psychological dispositions and states must have seemed perfectly possible, and the present fragment gives some evidence that the attempt to propound it did not have to wait for the Pythagorean and Platonist revivals of the first centuries A.D.

Theophrastus seeks to undermine the foundations of such an interpretation by denying the propriety of its first step, that which identifies relations between pitches with ratios between quantities. It is clear that he intended

to put another interpretation in its place, and what little we know of his treatment of music from other sources suggests that such a project would have been important to him; it is not unlikely that the main thrust of his *Peri mousikēs* was toward an account of the relation between music and the soul.³² Porphyry quoted the present passage for other purposes, and preserved little of Theophrastus' positive account, but a few hints can be extracted from its closing lines.

In dealing with the method that expresses pitch differences as linear distances between points, Theophrastus introduces the notions of *emmeleia* and *ekmeleia*. These terms, which are much used by Aristoxenus, refer to qualities of relations between notes. Such relations are "emmelic" if they are legitimate parts of a melodic sequence, "ekmelic" if they are not. For Aristoxenus, the character of each note, considered as an element in the complete melodic system, is expressed in its power (*dynamis*) to determine which relations between itself and other notes are "emmelic" and which are not. The whole system and the complex of *dynameis*, by which it is constituted, are fundamental givens of musical experience. The task of the harmonic scientist is to analyze the system, to articulate the various *dynameis* in their relations to one another (often, but not essentially or always, by reference to the sizes of intervals that may and may not occur in sequence), and to display his results as consequences of a determinate group of basic principles.³³ These principles are themselves arrived at inductively, by reflection on the perceived data of actual performance; they are autonomous laws of melody not derived from principles belonging to any other field (such as, e.g., physics or mathematics).³⁴

Theophrastus displays some sympathy with Aristoxenus' approach,³⁵ but in an important and interesting sentence he introduces a significant qualification: "It is a great help that melody is circumscribed (*periistasthai*) by these (*tautais*, i.e., by *emmeleia* and *ekmeleia*, the only feminine nouns in the vicinity), so that we can discover the notes that are attuned (*synērmomenous*) to one another" (65.4–5). This is not something that Aristoxenus could properly have said, for in his view, for two notes to stand in the relation of *emmeleia* to one another precisely is for them to be *synērmomenoi*, to exemplify a form of what he calls *to hērmosmenon*—the former is the same as the latter, not useful evidence by which the latter may be detected.³⁶ For Theophrastus, it appears, the fact that our senses accept notes in certain relations as exemplifying *emmeleia* is a sign of something else, a *harmonia* of a different order. It is because they reflect this *harmonia* that audible sequences are melodically legitimate, i.e., music rather than meaningless sounds.

The last sentence of the fragment gives us a tantalizingly brief glimpse of what it is, on Theophrastus' view, that makes something music: "There

is one nature of music: it is the movement of the soul that occurs in the releasing of it from the evils due to the emotions, and if it were not this, it would not be the nature of music" (65.13–15; the closing remark might mean "and if this did not exist, neither would the nature of music exist").

If we link this assertion with the first sentence of the fragment, we may infer that the "accuracy" to which the latter referred is the accuracy with which the soul can represent vocally these "therapeutic" movements, the movements that "release the soul from the evils due to the emotions." In saying that it is its relation to these movements that makes something music, Theophrastus is sketching a rather specialized version of a theory about music's primary and essential function that is familiar from other authors, particularly from Plato. By producing appropriate vocal sounds, the singer expresses the psychic movements that have the required effect on the soul. In so doing, we may infer, he stimulates these movements in the souls of others, and perhaps reinforces them in his own; that this should be so is not a casual or secondary effect of music but constitutes its essence.

Related ideas can be found scattered throughout the works of Plato, most notably in *Republic* 3 and *Laws* 2. The *Republic's* discussion of the moral and psychological dimensions of music has another significant affinity with the work of Theophrastus. In sharp contrast to the remarks about music in *Republic* 7, the theories advanced in Book 3 contain not the slightest suggestion that differences between melodic and unmelodic sequences, or between the various *harmoniai* that reflect distinct psychological conditions, are to be understood in quantitative terms, let alone explained in terms of mathematical principles. Their characterization is wholly qualitative, despite the fact that the discussion depends on the legislator's capacity to distinguish sharply and reliably between the different *harmoniai*. If this capacity is to attain the status of scientific understanding, Plato might have been expected to direct our attention to its mathematical credentials, and he does not. It would obviously be unsafe to infer a direct connection between *Republic* 3 and Theophrastus' position simply on the grounds of Plato's silence. But Plato makes it plain that the musical arguments propounded by Socrates in *Republic* 3 are to be treated as a summary of the doctrines of the fifth-century musicologist Damon, and are to be filled out by reference to the details of his work (399E–400C, cf. 424C). At least a moderately plausible case can be made for the view that Theophrastus was building on Damonian foundations.

Theophrastus has drawn attention to the accuracy with which the soul uses the voice to produce, and presumably also uses the ear to recognize, audible sequences of pitches that correspond in some way to certain movements of its own. The correspondence is not quantitative, a matter of ratios and proportions, but qualitative; it must be possible to find some way of

identifying in audible pitch sequences qualities that are the same as, or in some way analogous to, qualities of psychic states. We know infuriatingly little about Damon, despite his high and enduring reputation. We do know that he made a good deal of the idea that music influences character, for good or ill, and it is a fair inference from what Plato says of him that he supported and elaborated his view through an analysis of correspondences between musical and psychic forms.³⁷ We know also that according to Damonian doctrine melody is generated by movement of the soul, and that movements of different moral types create music of corresponding moral types.³⁸ In addition, we have a story in one late source that assigns to him notions about musical therapy that are closely comparable to those elsewhere associated with Theophrastus.³⁹

These general similarities with Theophrastean theory are much too vague to support any substantial conclusions, but they may legitimately encourage us to look for additional links, and specifically to ask whether Plato's silence on the quantitative nature of harmonic analysis in *Republic* 3 reflects the qualitative character of the accounts he found in his source. If it does, it would be possible to construe Theophrastus as agreeing with the general thrust of Platonic and Pythagorean treatments of music—in so far as they seek to relate the character of music to moral and emotional conditions of the soul—while rejecting their quantitative approach to the elaboration of these relations, and their attempt to find a basis for these relations in laws of pure mathematics. He would be stigmatizing these, in effect, as a modern (fourth-century) aberration, which needs to be corrected by appealing over Plato's head to the Damonian researches from which he began.

The hypothesis depends on the assumption that Damon's analyses of the *harmoniai* were articulated in terms of qualities attached to them and to their constituents, not of the ratios or the distances between the notes from which they are built. The evidence is not conclusive but gives modest grounds for optimism. In the first place, one of the many mysteries about Damon is why, though philosophers and historians of culture throughout antiquity continued to refer to him with deference as one of the great figures in the history of musical theory, he is almost never mentioned by technical writers on the subject, either as an authority or as the proponent of a theory to be refuted. Aristoxenus does not mention him, and neither do his followers in subsequent centuries. The Pythagorean tradition passes him over in silence; no acoustic scientist of the Lyceum names him; he does not appear in Ptolemy or Porphyry, except as a name, no more, in the latter's list of schools of musical thought in the period before Aristoxenus. Yet it is clear from Plato's remarks that Damon offered analyses of the *harmoniai*, and he must therefore have had some way of representing the melodic differences between them. If his analysis was not quantitative, however, either in the

style of the ratio-theorists or in that of the linear continuum of "up" and "down," it would be less surprising that the harmonic scientists ignored him. He was simply not playing the same game. This would also explain why Plato, having treated Damon with such respect in *Republic* 3 and in several passing allusions elsewhere in the dialogues, makes no reference to him in the context of his own essays in quantitative musicology, in *Republic* 7, in the *Philebus*, and in the *Timaeus*.

All this is negative, and we have only one relevant piece of positive information. Aristides Quintilianus, in the second book of his *De musica*, offers an account of the moral and therapeutic effects of music with whose general intentions Theophrastus would certainly have been in sympathy, though its broadly Neoplatonist framework divorces it completely, at the level of detail, from anything produced in the fourth or fifth centuries B.C. In this phase of his work Aristides' account of the morally relevant features of different melodic types is based entirely on qualitative characterizations of the notes they contain (though elsewhere he presents Pythagorean and Aristoxenian analyses with equal and uncritical enthusiasm); it is made to depend on a pervasive dichotomy between male and female qualities, some notes in the system being male, others female, and others mixtures of both types, with one character or the other predominating. The same dichotomy is harnessed to the analysis of characters and emotions in the soul, and thus the groundwork for a moral and therapeutic musicology is laid. What is important here is that in one passage he comes close to attributing this same theory to the school of Damon, and modern scholars have often claimed to perceive a Damonian turn of thought in the book as a whole.⁴⁰ The passage is worth quoting:

The *harmoniai* have the character of the intervals commonest in them, or of the notes that bound them, and these resemble the movements and emotions of the soul. For the fact that it is through similarity that the notes of a continuous melody both mould a character not previously present in children and in older people too, and draw out a character that was hidden within, was shown by the associates of Damon (*hoi peri Damōna*). At any rate, in the *harmoniai* that Damon handed down, sometimes the female moveable notes and sometimes the male can be found in greater quantity, or in less, or are omitted altogether.⁴¹

If we take this passage in the context of the negative evidence previously reviewed, we are entitled to adopt, at least as a working hypothesis, the view that Damon, in his attempts to correlate types of melodic structure with types of character, analyzed the former not in terms of quantities attached to their constituent notes or intervals, but in terms of certain

supposed qualities that the notes were held to possess. It is worth drawing particular attention to Aristides' claim that the Damonians found similarities between notes and characters. These similarities could be quantitative in form only if psychological dispositions as well as melodic structures were capable of being quantitatively analyzed, and no source gives the least encouragement to the view that Damon thought they were. The passage quoted does not entitle us to assume that Damon's qualitative analyses, like those of Aristides, revolved around the dichotomy of male and female; it is nevertheless not impossible that they did.⁴² It is also worth remarking that a theory attaching characters specifically to notes rather than to the relations between them, however conceived, will be in line with Theophrastus' insistence at 64.23 ff. that it is notes, not intervals, that are the *aitia* of melody. Quantitative theories tend to trace the significant differences between melodic types of relations between notes, not to features of the notes themselves, no matter whether it is to notes or to intervals that they attach quantities, since even in the former case it is differences of ratio between quantities, not differences of pure quantity, that distinguish one *harmonia* from another. It is a prominent feature of Aristides' theory that it assigns qualities directly to notes, in virtue of their identity as named elements in the system with determinate melodic powers or functions, and that intervals acquire their characters only by derivation from those of the notes that bound them. In his description of the Damonian *harmoniai* at the end of the quotation given above, Aristides distinguishes them by reference to the qualities of the notes they contain, not those of intervals or sequences of intervals.

Speculations about Theophrastus' debt to Damon give no help in the interpretation of the polemic that occupies the bulk of the fragment, since the positions attacked belong to the fourth, not the fifth, century. But the Damonian connection, if it existed, might be of interest in two other, related ways. First, it would suggest a route by which some of Damon's views were preserved into later antiquity, to reappear in casual remarks by Philodemus, Plutarch, and others, and perhaps more substantially in Aristides Quintilianus, despite his having been ignored by the specialist musicologists. Second, if the transmission of these views depended on Theophrastus' *Peri mousikēs*, and if what Theophrastus transmitted he also endorsed, it would be legitimate to use the later tradition about Damon to fill out our knowledge of Theophrastus' opinions, so far as the fragmentary and allusive nature of the surviving material about Damon permits. The dividends that this method of reconstruction would pay are likely to be modest, and the method itself is balanced precariously on a teetering pile of unsecured hypotheses. For all that, it might be worth trying.

NOTES

1. See particularly Plut., *Quaest.conv.* 623A; idem, *Non posse suav.* 1095E, 1096A. Other references include Athenaeus, *Deipn.* 22C, 624A–B; Philodemus, *De mus.* 3.35, 3.37; Pliny, *Hist.nat.* 28.21; Aul.Gell., *Noct.Att.* 14.13; Mar.Vict., *De art.gramm.* 159.8 ff. (Keil); Apollonius, *Hist.mirab.* 49.1; Censorinus, *De die nat.* 12.1; Martianus Capella, *De nupt.* 9.923, 926; Ioannes Lydus, *De mensibus* 2.19. The Arabic sources also produce enigmatic hints of a tradition of thought about music that was believed to be traceable to Theophrastus. Apart from these references and Porphyry's evidence of a Theophrastean *Peri mousikēs* (see next note), an interest in the subject is suggested by his detailed discussion of the manufacture of reeds for the *aulos*, *Hist.plant.* 14.11.1–7.
2. *Porphyrios Kommentar zur Harmonielehre des Ptolemaios* (hereafter Porph., *Comm.*) ed. I. Düring (Göteborg 1932; reprinted N.Y. & London 1980), 61.22–65.15, = fr. 89 Wimmer. All following references to it are by page and line of Düring's edition.
3. Düring gives a German translation and some notes in *Ptolemaios und Porphyrios über die Musik* (Göteborg 1934; reprinted N.Y. & London 1980), 160–68. There is an English paraphrase with comments in E.A. Lippman, *Musical Thought in Ancient Greece* (N.Y. 1975), 157–61. See also H. Gottschalk, "The *De audibilibus* and Peripatetic Acoustics," *Hermes* 96 (1968), esp. pp. 447–50; B. Alexanderson, *Textual Remarks on Ptolemy's Harmonica and Porphyry's Commentary* (Göteborg 1969); and A. Barker, "Music and Mathematics: Theophrastus against the Number-theorists," *Proceedings of the Cambridge Philological Society* n.s. 23 (1977) 1–15.
4. E.g., *Die Harmonielehre des Klaudios Ptolemaios* (hereafter Ptol., *Harm.*) ed. I. Düring (Göteborg 1932; reprinted N.Y. & London 1980), 11.1 ff. For explicitly Pythagorean examples see, e.g., Ptol., *Harm.* 30.9 ff. on Archytas (= DK 47 A 16); Nicomachus, *Enchiridion* 245.6 ff. (page and line in K. von Jan, *Musici Scriptores Graeci*, Leipzig 1895). In its most severely mathematical guise, Euclid, *Sectio Canonis* (148–66, in Jan).
5. E.g., Plato, *Tim.* 36a–b; Aristotle, *De sensu* 448a9–10; cf. *Metaph.* 1053a15–16; ps.–Ar., *Problemata* 19.23, 35, 39, 41.
6. I am particularly grateful for the comments made by Hans Gottschalk, the respondent to my paper at the Liverpool Theophrastus Conference, and by Malcolm Schofield on the same occasion.
7. For a discussion see pp. 7–8 of my paper "Music and Mathematics," note 3 above.
8. If this is Theophrastus' argument, it seems to justify a conclusion stronger than the one he presents. Pitches will be neither quantitative attributes of sounds nor qualities attached to them in the ordinary sense. Pitch, that is, is not an accident but an essential attribute of sound. If we treat sound as a genus, classes of sounds of specific pitches will be analogous to species, and their pitches to differentiae. Then at least on the approach adopted in the *Categories*, pitches will not be "in" sounds in the way that white, for example, is "in" this piece of paper. Being of some definite pitch will be part of what it is to be a sound, and being of *this* pitch will be part of what it is to be *this* sound. A pitch is not something attached to a sound and "in" it as a predicate, any more than biped is "in" man, or "in" any particular man. See *Cat.* 3a21 ff. with Ackrill's

notes (J.L. Ackrill, *Aristotle's Categories and De interpretatione* [Oxford 1963] 85–87).

9. It is not obvious that this is a correct translation of the phrase *pleious arithmous kineisthai*; quite apart from the fact that the sense of my translation is at best vague, it is natural to construe *pleious* as meaning not “greater” (i.e., of higher magnitude) but “more.” The phrase would then mean “to be moved in respect of more numbers,” i.e., greater numbers of numbers. I am grateful to Jonathan Barnes for insisting that I should pay this fact some attention; for an attempt at making sense of it see note 17 below. For the present it will not be misleading to retain the more straightforward if arguably less accurate translation “greater numbers.”
10. See the fragment quoted at Porph., *Comm.* 56.5–57.27 = DK47 B 1.
11. Archytas cited in note 10 above; Plato, *Tim.* 67A–C, 80A–B; and e.g., ps.–Ar. *Problemata* 11. 3,6,10,13,14, *ibid.* 19. 21,35,37,50; *De audibilibus* 801a6–10, 803a6–7.
12. See the careful distinctions drawn by Aristotle at *De an.* 420a27–b5.
13. *Sect. Can.* 148.3–149.8 (Jan); *De audib.* 803b27–804a8; Heraclides (the identity of this Heraclides is uncertain, see Gottschalk cited in note 3 above, pp.450–52) ap. Porph., *Comm.* 30.19–31.21; ps.–Ar. *Probl.* 19.39. The Heraclides passage is designed to explain the apparent continuity of sounds, despite the multiplicity of discrete impacts that each involves. It does not treat pitch as directly dependent on frequency of impact; this is made clear by the use of the term *phthongos* (note) for a single impact (31.15). Despite Gottschalk’s arguments, I think that something similar is true of the *De audibilibus*. The passage in question offers an explanation of the apparent continuity of sounds and of the unified effect of concords but not a deliberately articulated theory of pitch; the author’s account of pitch is missing from the passages quoted in our source (Porph., *Comm.* 67.24–77.18. That Porphyry has been selective in his quotation is indicated by his introductory comments, 67.20–21; cf. 77.19–20). The passages mentioned at note 11 above strongly suggest that he relies on a velocity theory, doubtless expounded in one of the paragraphs that Porphyry omits. The interests of the writer of the *Problems* are restricted in a similar way, and there is insufficient evidence to tell what theory of pitch he espouses.
14. The *Sectio* is no doubt later than Theophrastus. If, as I think, it is the first and perhaps the only one of our sources to assert the dependence of higher pitch on greater frequency of impact, it plainly could not be a proponent of this theory that Theophrastus is attacking. But other authors, as I have said, notice and make use of the fact that higher pitches are *associated with* greater frequency of impact, though they are not in their view causally dependent on it (in addition to the passages cited in note 13, see *Probl.* 19. 19). It would be a mistake to insist that the correlation of higher pitches with greater frequency was unknown as a datum of experience until it was used in the *Sectio* as the basis of a causal hypothesis. It would then be perfectly appropriate for Theophrastus to allude to the correlation, and to argue that this quantitative feature of a sound’s determinants cannot be used, any more than can the others, as evidence to support the claim that pitch is itself a quantitative attribute.
15. Düring’s punctuation of 63.33 seems perverse. I remove his commas after *einai* and *mallon*. The words *mallon antilepton estin* are to be taken together; the commas could fairly be relocated after *pephyke* and *estin*.
16. *Ptolemaios und Porphyrios* 162, n. 2.

17. I referred in note 9 above to the fact that *pleious arithmous* seems to mean more numbers rather than greater numbers. If this is a way of saying "a larger number of numerable items," *pleious arithmous kinēsthai* would naturally be construed as a reference to a greater number of movements, perhaps more impacts, but we have found difficulties in treating the formula as a way of referring specifically to the impact theory. If I am right in associating it with a notion of momentum, the point of the phrase might be to draw our attention to the fact that greater momentum is not a product of the greater magnitude of just one variable but of a greater overall total that is made up from numbers assigned to degrees of magnitude in some variables, and to numbered pluralities in others. To describe this heterogenous complex as comprising "more numbers" would be a forgivable piece of shorthand.
18. There are attempts at both forms of explanation in ps.-Ar., *Probl.* 11. For those of velocity theorists see sections 6 and 47, for those of theorists relying on a conception of the shape of a sound—sections 16 and 20. Explanations of both types are offered in 19, with suggestions of an attempt to coordinate them into a single hypothesis.
19. See especially the remarks of Ptolemaïos of Cyrene and Didymus, quoted ((with comments) at Porph., *Comm.* 25.3–29.25.
20. See *Probl.* 11.16, 20; 19.8, 12; cf. 24.
21. The theory is attributed to Theophrastus by Gottschalk (note 3 above), pp. 447, 449, on the strength of a remark by Priscian, *Metaphr.* 30 p. 14. 10–12. Either Priscian misunderstood his source or Theophrastus proposed elsewhere a view that is scarcely compatible with the content of the present fragment.
22. But he may have attempted the task elsewhere; see Gottschalk, p. 447.
23. 61.22–4. A few comments on this translation. (1) I construe *melôidētikon* in a causal sense, on the analogy with such words as *kinētikos*. (2) The second *it* in the first sentence must be the movement, since the Greek is *auto* and *kinēma* is the only neuter noun available. The first *it*, the subject, must therefore be the soul, since movement is the object, and the voice—the only other item mentioned—is represented as the instrument by which the subject achieves its effect. (3) That the subject of the second sentence is also the soul is suggested by the repetition of "it wishes" from the first sentence. This is confirmed by the fact that "it is capable" translates *hoia t' esti*, the subject of which must be feminine. It cannot then be the movement (*kinēma*), and it can hardly be the voice, since this seems to be the (feminine) object of the sentence (*tēnde, tēn alogon*); unless we are to say that the voice turns the soul (which is a possible idea, but plainly not one that Theophrastus has in mind here; the notion that the voice does something "as it wishes" would also be at least very strained), it must be the soul that turns the voice. (4) The sense of *alogon* is unclear. It may be "irrational," the implication being that irrational things cannot be controlled with absolute precision. Alternatively, it might here be "wordless": various Arabic sources, which Professor Dimitri Gutas has kindly brought to my attention, represent Theophrastus as saying that the soul has "conformations" (*schēmata* ?) which it cannot express in words, and which it therefore expresses through melody and bodily movement. If this suggestion is right, the point will be not that the *alogos phônē* is limited in its capacity to represent the soul's condition, but that its capacity extends beyond what words can express (though of course words, on their side, may express things that music cannot). Düring's and Lippman's versions should perhaps be recorded here. Düring's German translation is as follows:

- “Der Antrieb zur melodischen Bewegung, der in der Seele entsteht, ist sehr deutlich, wenn wir ihn mit unserer Stimme ausdrücken wollen; er wirkt auf die Seele, wirkt nach eben dem Masse, wie er auf einen unbewussten Seelenteil wirken kann, in der beabsichtigten Richtung” (*Ptol. und Porph.* p. 161). This incorporates several mistakes. Similarly Lippman, abbreviating and paraphrasing, offers: “Melodic motion, as it is expressed in the voice, acts upon the soul in accordance with the intention of the singer” (*Musical Thought*, p. 157). Wimmer, however, in his Latin translation, seems to have got the sense more or less right.
24. E.g., *El. harm.* 32.10–34.33, esp. 32.18–28, 44.15–20; cf. 12.1–34.
 25. This is an inferred extension, but I think a proper one, of the demands he makes at *Rep.* 531C2–4.
 26. Archytas at DK 47 A 16 and B 2; Plato at *Tim.* 35B–36B.
 27. *Sect. can.*, introduction (149.14 ff., Jan), and, e.g., *Propositions* 10, 11, 12; cf. Archytas at DK 47 A 19.
 28. *Ptol.*, *Harm.* 11.12 ff.
 29. For a discussion of some examples, particularly in their applications to political theory, see F.D. Harvey, “Two Kinds of Equality,” *Classica et Mediaevalia* 26 (1965), 101–46.
 30. Best known from Plato, *Phaedo* 85E–86D, Ar., *De an.* 407b28 ff.
 31. *Tim.* 35B–36B.
 32. It is to his interest in these matters, and in the extension of musical therapy from psychological to somatic disorders, that almost all the passages cited in note 1 above draw attention.
 33. These remarks reflect my reading of *El. harm.* as a whole and cannot be justified by a few selective references. But see particularly 33.1–34.30, 38.27–44.21, 47.8–50.14, 68.13–69.28; and cf. my paper, “Aristoxenus’ Theorems and the Foundations of Harmonic Science,” in *Ancient Philosophy* (forthcoming).
 34. See the references given at note 24 above.
 35. There is no way of establishing whether Aristoxenus’ *El. harm.* was written before or after Theophrastus’ *Peri mousikēs*, but the issue is not as important as it might seem. Aristoxenus wrote a great deal over an extended period and certainly used in other works the ideas that form the methodological backbone of the *El. harm.* Even the *El. harm.*, as we now have it, is not a single work to which a “publication date” could in principle be assigned: there has been much controversy about the relation between the first two books, but it is at least strongly arguable that Book 1 is a relatively early piece, of which Book 2 is in part a more mature revision. (For a survey of opinions on the issue see, e.g., R. da Rios, *Aristoxeni Elementa Harmonica* (Rome 1954), Prolegomena pp. cvii–cxvii.) Questions about dating give us no reason, therefore, to suppose that Theophrastus was unfamiliar with Aristoxenian views at the time of writing his *Peri mousikēs*; a Theophrastean reference to Aristoxenus may be embedded in Apollonius, *Hist. mirab.* 49 (= Testimonium 23 in da Rios).
 36. Compare, e.g., the uses of *ekmeles* and *emmeles* at 54.7–13 with that of *to hērmosmenon* a few lines later at 54.21.
 37. *Rep.* 400A ff.; cf. 424C and Philodemus, *De musica* 1.13.
 38. Athenaeus 628C in a sentence that might almost have come from Theophrastus’ pen.
 39. Galen, *De Hipp. et Plat.* 5.453 = DK 37 A 8.
 40. E.g., W. Anderson, “The Importance of Damonian Theory in Plato’s Thought,” *TAPA* 86 (1955), 88–102; cf. idem, *Ethos and Education in Greek Music* (Harvard

1966), 74–81; F. Lasserre, *Plutarque de la Musique* (Olten and Lausanne 1954), 80–87. Notes of caution and arguments against the connection are offered in G.F. Else, “‘Imitation’ in the Fifth Century,” *Classical Philology* 53 (1958), 78–90, and C. Lord, “On Damon and Music Education,” *Hermes* 106 (1978), 32–43.

41. Aristides Quintilianus, *De musica* 80.23–81.2 (Winnington-Ingram).
42. If so, the games played with genders at Aristoph., *Clouds* 659 ff., in view of the “musicological” knock-about that precedes them, might be intended as a parody of Damon as much as of Protagoras or Prodicus, but this suggestion must remain wholly speculative.

Index of Ancient Sources

ABŪ L-FARADJ IBN AL-ṬAYYIB

vid. COD. vel MS. Nuruosmaniye 3610

ABŪ SULAYMĀN AS-SIJISTĀNĪ

TaḤālīq

ap. Ibn Abi Uṣaybiḥa 1.57.19-20

78

ALBERTUS MAGNUS

De anima

2.3.8-12

171-172

3.25

167-70, 175, 180n.21

3.3.7

167, 175

3.3.11

172

3.3.12

173

De intellectu et intelligibili

1.1.1

180n.22

1.3.1

180n.16

1.3.3

180n.22

2.1.4

180n.22

2.1.8

180n.22

Super Dionysium de divinis nominibus

4.27

180n.19

ALBINUS

Didascalicus

p.158 (Hermann)

140

ALEXANDER APHRODISIENSIS

De anima

p.82.1 Bruns

168, 174

p.91.1-2

179n.11

In Aristotelis Analytica priora

p.220.9 ff. Wallies	114n.82, n.96
p.262.32 - 264.17	132
p.263.26 - 264.6	131
p.265.30-1	133
p.324.19-29	133
p.325.33 - 328.7	127, 133, 134, 137
p.340.14	46
p.388	114n.84
p.389.31 - 390.9	200n.52, 125-41
p.397.25 - 398.17	134, 141n.21

In Aristotelis sensu

p.71.24-72.4	201n.91
p.88.19-89.5	203n.126

In Aristotelis Topica

p.126.31 - 127.16 Wallies	175
---------------------------	-----

De intellectu

p.108.23 Bruns	179n.11
p.110.13	179n.11

AMMONIUS

In Aristotelis Categorias

p.5.31-6.8 Busse	116
------------------	-----

In Aristotelis De interpretatione

p.65.31 ff. Busse	254-55
p.73.19-33	140n.19

ANONYMUS

In Aristotelis Ethica Nicomachea

p.180.17 Heylbut	60n.42
p.210.15-17	60n.42, 61n.46

Kitāb al-Rawābi^c, versio Latina

p.139.14 ff. Badawī	109
---------------------	-----

Kitāb fīhi āra' al-hukamā' fī l-tabī^c iyāt

vid. COD. vel MS. Istanbul, Aya Sofya 2450

In Porphyrii Isagogen

p.129 Rose	60n.42
------------	--------

De tropis poeticis

RhGr t.3 p.208.24	264n.8
-------------------	--------

Vita Aristotelis Marciana

44 et 46 Düring	79
-----------------	----

Vita Aristotelis Syriaca

124 Baumstark	79
---------------	----

ANTIGONUS

Historiae mirabiles

130 (145)	60n.38
-----------	--------

APOLLONIUS		
Historia mirabilium		
49.1	289, 320n.1, 1n.1	
APOLLONIUS RHODIUS		
Argonautica		
3.296		48
APULEIUS		
De interpretatione		
177.3-10 Thomas		140n.11
193.16		126
ARISTIDES QUINTILIANUS		
De musica		
p.80.23 - 81.2 Winnington-Ingram	318, 324n.41	
ARISTO CEUS		
fr. 25 Wehrli		232
ARISTOPHANES		
Nubes		
659 ff.	319, 324n.42, 53n.42	
Ranae		
1058-9		261
ARISTOTELES		
De caelo		
4.2		114n.76
Categoriae		
3a21 ff.	295, 320n.8	
10b26-11a19		213
De interpretatione		
16b27-9		50
Analytica priora		
45b17		132
50a39-b2	125, 127	
51b10-27		134
57b1-2		141n.23
Analytica Posteriora		
73a34-7		218
73b10-16		218
98a17-19		161n.23
Topica		
132a1-4		217
133a3-5		217
134a8-11		217
134b5-7		217
137b14-138a29		175

167b1-8	141n.23
181a22-9	141n.23
Physica	
198a18	156, 160n.12
202a17	45
226b27-8	228n.18
246b20-247a19	228n.14
Meteorologica	
358a4-359b7	201n.89, 202n.101, n.104
382b11-12	169
389b28-390b1	160n.13
De anima	
403a3-b19	210, 218, 222, 225
407b28 ff.	314, 323n.30
412a27	173
412b5	173
413b34-5	176
415a22-b8	160n.6
418b9-10	172
418b20	202n.111, n.112
419a25-35	203n.125
420a27-b5	299, 310, 321n.1.2
421a7-422a7	200n.40, 202n.106-8, 203n.134, 204n.154
422a8-422b16	199n.32, 200n.42, n.54, n.65, 205
429b6-10	168
429b22 ff.	112n.46
429b23-5	177
430a15-16	170
430a10-20	166
432b12-20	200n.66
434b14-15	205
De sensu	
439b18-440b23	200n.37, n.53
440a10-12	217
440b26-442b26	199n.27, n.36, 200n.54, n.56, n.65, 201n.90, 204n.154, 205
442b27-444b13	202n.103, n.106-8, 203n.125, 204n.145, 205
445b21-446b15	200n.37, n.54, 202n.112
448a9-10	291, 320n.5
De somno	
456a17	169
458a17	162n.38
De iuventute	
467b31-4	151
468a2-5	151
468b32-469b8	162n.39
476a16-b10	161n.33
Historia animalium	
486a26-b17	213, 220

490b1-4	157, 161n.19
491a16-17	220
491b28-34	161n.28
494a20-b1	161n.33
496b10	154, 162n.38
500a6-7	161n.26
501a14	161n.24
507a33-b12	161n.23
552b20-3	161n.19
566b27-567a14	161n.28
609b23-5	161n.18
De partibus animalium	
640a22	44
644a12-b15	220
646b11-19	160n.13
650a22	202n.99
650b29	154
656a13	151
658a19-21	153
658a22-4	160n.4
658b33-659a36	161n.21 & n.22
662b27-666b34	148-51, 154, 160n.4, 161n.23, 25-27, 31
665b28	44
667a3-6	154
671b1-3	161n.21
672b21	160n.4
674a31-3	161n.23-4
677a16-18	160n.12, 161n.28
680b14-15	161n.34
683b19-25	161n.34
684a31-b2	161n.21-2
686a9	154
686b35	151
687a15-b5	161n.21
688a12-25	147
689a6-8	161n.21
690a1-5	161n.21
691b8-25	161n.21
692a12	147
696b26-32	160n.5, 162n.46
De incessu animalium	
704a10-13	162n.44
705a28-b18	151, 161n.33
706b11-16	152
707a16-29	162n.44
De generatione animalium	
728a1-6	156
731b24-732a1	160n.6
736b27-8	168

738a10-b9	156
Metaphysica	
910a22-3	160n.18
985b23 ff.	292
990b9	156
1044b12	160n.12
1053a15-16	291, 320n.5
1053b28-34	200n.53
1066a31	45
1072a23-5	106
1093a13-19	205
Ethica Nicomachea	
1095b4-8	122
1096a32	240
1105a5-6, 10-12	226
1105b21-3	217, 226
1106a21-2	224
1106b33-4	215
1122a22	215
1125a12-14	287n.23
1135a8-15	61n.47
1145a22-33	214
1148b34-1149a20	214
1149b20-3	219
1155b13-14	202n.52
1162a7-11	214
1162b5-6, 16-21	229n.25
1181a25-b14	234
Ethica Eudemia	
1220b3	45
1220b12-14	216-19, 224
1231b13-15	215
1243b8	281
Politica	
1256b21-2	158, 160n.5
1266a8 ff., 1309a33 ff.	247n.60
1273b27-1274b28	50
1290b40-1291a1	52
1300a10	52
1312b32-4	219
1314b16	240
Rhetorica	
1354a13 ff.	254
1356a1-16	226, 278
1360a30-37	235
1360a34	244n.5
1370b13	222
1371b4 ff.	253
1372a1	223

1373b1	51
1378a18-22	214, 217-18, 225-6
1378a30-1380b33	210, 214, 218-19, 222
1380a2-5	278
1381b34	214
1382a12-13	219
1382a21	218
1383b12	218
1386a33	271, 285n.9, 288n.39
1400b32	253
1403b21-32	224, 264n.9, 269-288
1403b36-1404a 8	271, 287n.29
1404a1 ff.	254
1404a12-19	276, 284n.2, 287n.29
1404a25 ff.	255
1404b1	254
1404b3-4	255, 260
1404b8	258
1404b16-17	261
1404b36-7	255, 265n.26
1405a5-8	254-5, 266n.42
1405b18-19	266n.41
1405b34 ff.	260
1406a1 ff.	267n.53
1406a16	260
1408a10 ff.	261
1408a19 and 32 ff.	253
1408b5-10	271, 277
1408b13 ff.	267n.52
1408b27-35	255, 265n.29, 267n.50
1409a31	265n.29
1409b10	264n.5
1409b32 ff.	267n.52
1410b20 ff.	253
1413b3 ff.	261
1413b9-10	224, 270
1413b9-1414a 17	271, 276-7, 228
1414a16	276, 285n.8
1414a18 ff.	255
1414a27	265n.29
1414a29	52
1416b35	264n.15
1417b2	253
Poetica	
1444b8-17	253
1450b16-18	286n.10
1453b1-6	286n.10
1454b16	285n.9
1455a22-31	280

1456a37 ff.	265n.20
1456b8-9	52
1456b10-1457a22	271, 275
1458a17	265n.25
1461b29-1462a18	271, 283, 285n.10, 286n.11, 287n.25
[ARISTOTELES]	
Atheniensium respublica	
16.2-4	246-47n.53
41, 42-69	234
57.3, 58.2, 59	236
De audibilibus	
800a	311
801a6-10	299, 321n.11
803a6-7	299, 321n.11
803b27-804a8	300, 321n.13
Magna Moralia	
1200b9	215
De mirabilibus auscultationibus	
832b26-833a23	60n.38, 48
Physiognomonica	
814b2-5	274
De plantis	
817b19	202n.99
Problemata	
11.3	299, 321n.11
11.6	299, 304, 321n.11, 322n.18
11.10	299, 321n.11
11.13	299, 321n.11
11.14	299, 321n.11
11.16	304, 310, 322n.18 & 20
11.19	304, 322n.18
11.20	304, 310, 322n.18 & 20
11.47	304, 322n.18
12.3	202n.140, n.142
13.4	202n.99, 204n.140
19.8	310, 322n.20
19.12	310, 322n.20
19.19	300, 321n.14
19.21	299, 321n.11
19.23	291, 320n.5
19.24	310, 322n.20
19.35	291, 299, 320n.5, 320n.11
19.37	299, 321n.11
19.39	291, 320n.5
19.41	291, 320n.5
19.50	299, 321n.11
22.8	201n.84
23.35	202n.105

32.1,8	279
Rhetorica ad Alexandrum	
1421b7-14	53

ARISTOXENUS

Elementa harmonica

8.13 ff.	309
9.2-11	297
12.1-34	297, 314, 323n.24
32.10-34.33	308, 314, 315, 323n.24, n.33
38.27-44.21	314-5, 323n.24, n.33
47.8-50.14	315, 323n.33
54.7-13	315, 323n.36
54.21	315, 323n.36
68.13-69.28	315, 323n.33

ASPASIUS

In Aristotelis Ethica Nicomachea

p.44.20-1 Heylbut	225
p.156.17	61n.46

ATHANASIUS

Prolegomena

p.176.21-177.8	270
p.177.3-8 Rabe	224, 264n.9

ATHENAEUS

Deipnosophistae

1.21A-B	274, 285n.9
1.22C	283, 289, 320n.1
4.173E	61n.53
8.348A	223
10.435E	243
14.564D	61n.53
14.624A-B	289, 320n.1
14.628C	317, 323n.38
15.673E-F	123, 60n.42

AVERROES (=IBN RUŠD)

Commentarium magnum in Aristotelis De anima

trans. Michael Scot

3.5	112-3n.47, 170, 175, 179n.13, n.15
3.20	170, 179n.11, 180n.24
3.36	170, 176, 179n.11, n.12

trans. Jacobus Mantinus

f.140C and F	179n.13
--------------	---------

Talḥīṣ Jadal

51, 56, 128, 242, 244, 291	81
----------------------------	----

AVICENNA (=IBN SĪNĀ)
Ḥal an-nafs al-insānīya

45.6	95
Liber de anima	
5.6	180n.20

BAARLAMUS

Ethica secundum Stoicos

1362B Migne	224
1362C	273, 285n.9
1363B	224

BAR-HEBRAEUS (=IBN AL-CIBRĪ)

Muḥtaṣar Ta'riḥ ad-Duwal

55-6	76, 80, 111n.12, 114n.81
------	--------------------------

BASILIIUS SELEUCENSIS

De vita ac miraculis S. Theclae

2.29	45, 59n.26
------	------------

AL-BĪRŪNĪ

Kitāb al-Djamāhir fī maʿrifat al-djawāhir

p.258 ff.	114n.72
-----------	---------

BOETIUS

Commentarii in librum Aristotelis De interpretatione

12.3-16	127
De hypotheticis syllogismis	
1.1.3 (Obertello)	126, 127
1.1.5	140n.11
1.2.5	127
1.3.2	140n.11
1.3.4	132
De musica	
3.11	314, 323n.27
In Aristotelis De interpretatione, sec. ed.	
p.9.24 Meiser	49
p.10.26	49
p.12.5	49
p.102.25-6	49

BURLAEUS

De potentiis animae

137	181n.27
-----	---------

De vita et moribus philosophorum

68	223
----	-----

CENSORINUS

De die natali

12.1 289, 320n.1

CICERO

Academica

1.33 251

Ad Atticum

6.1.10 245n.17

Brutus

37 251

44 257

119-21 251, 264n.2

142 270

172 265n.30

De divinatione

2.4 252

De finibus

1.6 234

5.11 233, 239, 246n.26

De legibus

2.15 245n.17

3.13 233, 237

3.14 234, 245n.6

De officiis

1.3 264n.4

Orator

12.39 245n.23

20 ff. 257, 260

39 267n.51

55 270, 272, 288n.34

56 272

60 272

62 264n.1

69 257

79 252, 255-6, 265n.32

92 264n.4

94 264n.4

127 264n.2

172 61n.56, 252

192-4 267n.50

De oratore

1.43 251, 264n.6

1.49 251

1.161 280

2.183-90 279, 280, 288n.34

3.213-27 269-288

3.37 ff. 256, 256n.32

3.82 257

3.91	257-8
3.104-47	266n.34
3.182 and 187	264n.6
3.212	266n.49
3.217-19	224
Partitiones oratoriae	
19	266n.35
31-2	259
72-3	259
Tusculanae disputationes	
1.44	83.86
3.69	92-3
[CICERO]	
Rhetorica ad Herennium	
3.19-27	269, 272, 286n.16, n.21
4.11-16	260, 262
4.16-19, 32, 45, 67, 69	259
CLEARCHUS	
fr.63-95 Wehrli	74
CODICES vel MANUSCRIPTI	
Cairo, Dar al-Kutub, Hikma 1M	121, 123
Cairo, Dar al-Kutub, Hikma 6M	119, 123
Escorialensis 798	144n.88
Escorialensis 888	108
Istanbul, Ahmet III, 3206	78-9
Istanbul, Aya Sofya 2450	105-6, 112n.33
Istanbul, Fatih 3222	73-4, 91-2, 100
Istanbul, Köprülü 1608	84, 95, 100
Londinensis (Br. Mus.) Orient. Add. 25738	84-6, 91, 93, 100
Manisa, Genel Kitaplık 1705	84, 94, 97, 100, 104
	111n.15-16, n.20
Monacensis Orient. 651	98, 100
Neapolitanus II D 22	92
New Haven, Yale, Landberg 615	75, 85, 88-9
Nuruosmaniye 3610	114n.71
Oxonienensis (Ousey) 95.16	106
Parisini 2772, 4718, 4887	223
Rampur, Rida 2367	107
Syr. Cantabrigiensis Gg.2.14	113n.58
Teheran, Malik 5925	106
Vaticanus Graecus 2306	237-8
DAVID	
In Porphyrii Isagogen	
p.102.4 Busse	60n.46

DEMETRIUS

De elocutione

12-15	262, 265n.42, 267n.52
20	272, 287n.30
36-7	262
41	258, 267n.50
58	264n.5
77	258
78	266n.42
114	260, 266n.47
116	267n.53
119	260
173	258
181-2	264n.3
193-5	276, 282
222	253, 264n.14
237	261, 266n.47
271	276

DEMETRIUS PHALEREUS

fr. 156-73 Wehrli	251, 264n.5, 267n.52
-------------------	----------------------

DEMOSTHENES

Orationes

18.265	282
19.200	282
19.330	44
20.60	44

DICAEOARCHUS

fr. 42 Wehrli	251, 264n.5
fr. 100-3	74

DIODORUS SICULUS

Bibliotheca

11.55, 87	246n.52
-----------	---------

DIOGENES LAERTIUS

Vitae philosophorum

1.22-4	45
1.33	44
1.68	45
2.1	45
2.6	45
2.11	45
2.20	45
2.40	45
2.65	45
2.112	45

2.123	45
3.18	45
3.19	45
3.24	46
4.2	45
4.3	45
4.4	60n.41
4.14	60n.41
4.28	45
5.9	45
5.22-7	245n.8, 215, 285n.6, 60n.41
5.36-57	78, 1-62
5.38	251, 264n.1
5.40	94
5.42	241
5.42-50	198n.7-8, n.11, n.13, n.17, 198-9n.18, 201n.92 264n.9 & n.12, 232-3
5.43	248n.77
5.44	241
5.45	234, 238
5.46-7	223
5.47	241, 247n.54, 249n.90, 249n.97
5.47-8	269, 281, 283, 285n.6, 288n.47
5.48	248n.86
5.49	241, 245n.13
5.50	241
5.57	163n.49
5.59-60	126
5.72	54
5.80	232
5.88	60n.41
6.62	87
7.59	256
9.1-17	58n.10
9.30	44
9.45-9	48
9.61	44
10.35-83	58n.10

DIOMEDES

Ars grammatica

GL t.1 p.489 10-13

286n.20

DIONYSIUS CARTUSIANUS

De consolatione philosophiae

vol. 26 p. 218, ed. a.1896-1913

176-177

De lumine Christianae theologiae

vol. 33 p. 292

180n.17

De quatuor hominis novissimis vol. 41 p.511 col.2B	180n.25
Protestatio ad superiorem suum vol.41 p.625-6	176
DIONYSIUS HALICARNASSENSIS	
De compositione verborum 16	254, 258, 260
Demosthenes 1	258
3	260, 262, 267n.52
15	260
53	272
54	276
Isocrates 3	257-8, 267n.54
Lysias 6	262
13	257
14	262
30	248n.71
Ad Pompeium 3	256-7
Thucydides	257
DONATUS	
De comoedia 6.3 (t.1 p.26.7-8 Wessner)	286n.20
ELIAS	
In Aristotelis Categorias p. 117.15-119.25 Busse	118-21
[ELIAS]	
In Porphyrii Isagogen p.63.22-4 Westerink	60n.46
EPICTETUS	
Dissertationes 1.6	229n.26
EPITOME LAURENTIANA	
RhGr t.1 p.215.3-7	265.18
ETYMOLOGICUM MAGNUM	
s.v. deikterion	45

[EUCLID]

Sectio canonis

p.148.3 - 149.8 Jan

300, 321n.13

p.149.14 ff.

314, 323n.27

EURIPIDES

Bacchae

624

48

Hippolytus

1279

48

Ion

161-69

282

Iphigenia in Aulide

1470

48

AL-FARABĪ

In Aristotelis De interpretatione

53

126, 139 - 140n.4

Fī zuhur al-falsafa

ap. Ibn Abi-Uṣaybi'a 2.135.4

77, 80

Ma yanbagī

52

115-6, 119-20

Sarḥ al-Cibāra

22.7-8

81, 110

FULGENTIUS

Mitologiae

2.1

61n.46

GALENUS

Adversus Iulianum

4.4, 4.14, 5.10

201n.68

Adversus Lycum

4.6-7

199n.33

De alimentorum facultatibus

1.1.39

200n.45

De causis procatarcticis

15.192-3

200n.68

De methodo medendi

1

187-8, 201n.68

2.5

201n.68

Institutio logica

3.1 Kalbfleisch

132, 140n.11

3.3

130 - 131

7.2

126

8.2

137

De naturalibus facultatibus

1.13

163n.49

- 2.4 163n.49, 201n.68
 2.8 201n.68
 2.9 163n.49
- De placitis Hippocratis et Platonis
 t.5 p.453 Kuhn 317, 323.39
 5.3.17-18, 8.5.24 201n.68
- De propriis libris
 11 (p.118.13-16 Mueller) 49
- De simplicium medicamentorum temperamentis et facultatibus
 1.28 198n.9
 1.38 200n.43, n.46
 1.39 200n.48, 201n.70
 2.3 204n.143
 3.16 204n.148
 4.3 201n.87
 4.4 200n.51
 4.7 188-191, 201n.75
 4.9 200n.56
 4.11 201n.75, n.83
 4.14 201n.93
 4.18 200n.60, 206-6
 4.22 200n.39, 203n.133, 204n.143, n.151
 4.23 198n.3, 203-4n.137
- De temperamentis
 1.3 201n.68
- De usu partium
 4.15 163n.49
 5.5 163n.49
 8.6 203n.132
 8.7 203n.129
- AL-GAZĀLĪ
 Ihya'
 2.373.16-17 99, 104, 112n.32
- GELLIUS
 Noctes Atticae
 1.22.9 257
 4.13 289, 320n.1
 6.14 260
- GNOMOLOGIIUM VATICANUM
 226 Sternbach 87
 333 94
- GORGAS
 Helena
 8 254, 265n.19

HARPOCRATIO

Lexicon

s.v. orgenōnas 55-6

HERACLIDES PONTICUS

fr. 33 Wehrli 251, 264n.5
fr. 146-9 231, 244n.3

HERMOGENES

De ideis

1.2-2.9 53

HERODOTUS

Historiae

1.77 221
1.91 222
3.140 44
4.61 48
8.85 44
8.136 44
9.6 222

HIERONYMUS RHODIUS

fr. 50-2 Wehrli 251, 264n.5, 267n.52
fr. 53 200n.115

HIPPOCRATES

Aphorismi

1.1 248n.72
2.10 118-19

De ossibus

4 202n.115

HOMERUS

Ilias

1.104 273
6.182 48
8.563 48
13.320 48

Odyssea

7.101

HORATIUS

Ars poetica

140 ff. 264n.15

ḤUNAYN B. IṢḤĀQ

Nawādir

vid. ms. Monacensis Orient. 651

- IBN CABD-RABBIHI
Al-^{CI}qd al-farīd
6.4.16-18 99
- IBN ABI UṢAYBICA
Uyūn al-anbā'
1.36.16 77
1.57.4-11 77-9
1.57.6 74
1.57.19-20 78
1.68.22 81
1.69.22-3 76
1.69.23-6 81-2, 114n.14
2.102.18-20 81
2.135.4 77, 80
- IBN BUTLĀN
Al-Maḡāla al-miṣrīya
50-3 81, 90-1
- IBN DURAYD
Al-Mujtanā
no. 44 88
- IBN HIBBĀN AL-BUSTI
Raudat al-ʿuḡalā
p. 77.16-19 112n.44
- IBN HINDU
Al-Kalim ar-rūḡānīya
127-8 88
- IBN AL-^{CI}BIRI vid. BAR-HEBRAEUS
- IBN AN-NADĪM
Fihrist
247.19 77
248.21 81
249.3 81
249.23 81
252.5-7 76
252.7-11 81-2, 103-4, 111n.6
255.13-16 82
265.10 82, 113n.69
348.21 111n.14
- IBN AṬ-ṬAYYIB
Sarḡ al-maḡūlāt
vid. ms. Cairo, Dar al-Kutub, Hikma 1M

IBN RUŠD vid. AVERROES

IBN SINA vid. AVICENNA

IHWAN AS-SAFA'

Rasa' il

1.188

75

1.234.14-17

98

IOANNES LYDUS

De mensibus

2.19

289, 320n.1

ION CHIUS

fr. 742 PMG

248n.70

ISHAQ B. HUNAYN

Ta'rīḥ al-aṭibbā'

69.6

77-8

ISOCRATES

Antidosis

46-7

266n.48

Panegyricus

11

266n.48

JACOBUS de PLACENTIA

Lectura in III De anima

p.231.15 - 234.7 Kuksewicz

180n.24

AL-KIFTI

Ta'rīkh al-hukamā'

106.18 ff.

114n.81

JOHN BLUND

Tractatus de anima

p.32.27 Callus and Hunt

171-2

p.93

173

LUCRETIUS

De rerum natura

4.823-58

163n.48

LYCON

fr. 18 Wehrli

251

LYSIAS

Orationes

13.72

44

20.19

44

- fr. 10, p. 236 Scheibe 246n.53
- MARCUS AURELIUS
 Meditationes
 2.10 211
 7.14 229n.26
- MARIUS VICTORINUS
 De arte grammatica
 p.159.8 ff. Keil 289, 320n.1
- MARTIANUS CAPELLA
 De nuptiis Philologiae et Mercurii
 9.923 289, 320n.1
 9.926 289, 320n.1
- AL-MASCUDĪ
 Funūn al-maḥārif
 ap. At-tanbīh
 115 79-80
 121 77, 82
 180 80
- MENANDER
 Dyscolus
 81-2 277
- MICHAEL EPHESIUS
 In Aristotelis De animalium incessu
 p.144.5 Hayduck 162n.36
 In Aristotelis Ethica Nicomachea
 p.8.12-13 Heylbut 60n.42, 61n.46
 In Aristotelis Parva naturalia
 p.149.7 Wendland 198n.8
- MISKAWAYH
 Kitāb as-Saḥāda
 71.14-15 119
- AL-MUBAŠŠIR
 Muḥṭār al-ḥikam
 183.6-15 77-9
 248.17-18 88
 301.5 93
 301.7-8 88
 312.7-9 93
 315.2-8 93-4

NICOMACHUS

Enchiridion

245.6 ff. Jan

290, 320n.4

OLYMPIODORUS

In Aristotelis Meteorologica

p.156.26-157.8 Stuve

202n.102-3

Prolegomena logica et in Aristotelis Categorias

p.8.29-9.13

118

p.13.24-6, 30 et 34-5 Busse

60n.46

ORIBASII

Collectio medica

14.5

200n.44

PAPYRI

Greci e Latini (Publ. della Soc. Ital.)

1095

134

Hamburgiensis

128

251-2

Oxyrhynchus

7.1012

238, 240

PARACELSUS

Von Ursprung und Herkommen der Franzosen

3.14

201n.69

Paragranum

1

201n.69

PARTHENIUS

De amatoriis affectibus

9

240

18

240

PAULUS (?)

vid. COD. vel MS. Manisa Genel Ktaplik 1705

PAULUS PERSA

ap. MISKAWAYH 71.14-15

119

PAUSANIAS

Periegesis

5.14.9

248n.70

PHANIAS

fr. 11-19 Wehrli

231, 244n.4

PHILOCHORUS

FGrH 328 F 30 246n.52

PHILODEMUS

De musica

1.13 317, 323n.37, 50n.37

3.35 289, 320n.1, 1n.1

3.37 289, 320n.1, 1n.1

De poematis

5 col. 27-9 Jensen 255, 266n.35

Rhetorica

t.1 p.198 Sudhaus 277

t.2 p.57 234

PHILOPONUS

In Aristotelis Analytica priora

p.242.15-21 Wallies 126-7

In Aristotelis De anima

p.354.12-16 Hayduck 203n.126

p.392.31-3, 395.15f, 398.19 203n.128

In Aristotelis Categorias

p.5.15-33 Busse 117

p.7.20 126

p.7.20-2 60n.46

PINDARUS

Olympicae

1.1 48

Paeanes

6.97 48

PLATO

Ion

530D 275

535B-C 275, 279

Leges

636D5-7 226

759E 247n.60

Parmenides

135D 120

Phaedo

67B 118-19

85E-86D 314, 323n.30

Phaedrus

271A-E 271

271D 254, 265n.19

272A 247n.70

Protagoras

338A 266n.48

Respublica

399E-400C	316
400A ff.	317, 323n.37
424C	316-317, 323n.37
531A4-B6	308
531C2-4	314, 323n.25

Timaeus

35A-36B	291, 314, 320n.5, 323n.26, n.30
44D-45D	152, 161n.30
65B-66D	200n.39, n.41, n.46, n.61, 201n.74
67A-C	299, 321n.11
80A-B	299, 321n.11

PLINIUS

Naturalis Historia

28.21	289, 320n.1
31.83, 31.106	201n.92

PLUTARCHUS

Moralia

Amatoriae narrationes

772D-773D	241
-----------	-----

An seni respublica gerenda sit

791F	248n.79
------	---------

De cupiditate divitiarum

527B	87
------	----

Mulierum virtutes

249B-D	241
254B-F	248n.73
261E-262D	241

Non posse suaviter vivi sec. Epicurum

1095E	289, 320n.1
1096A	289, 320n.1

Praecepta gerendae reipublicae

799D-E	241
803F-804C	238-9, 247n.68
818E-F	241
819A	248n.79
825B-C	241

Quaestiones convivales

623A-C	272, 286n.14, 264n.16, 289, 320n.1
623F	204n.146
631E	264n.16
633B	223
672D-673B	89
676A-B	202n.95
704F	89

Quomodo quis sentiat

80C-D	247n.68
-------	---------

De recta ratione audiendi	
37F-38A	272, 286n.14
Regum et imperatorum apophtegmata	
175	249n.96
177C	243
De sera numinis vindicta	
552A	249n.96
Vitae	
Alcibiades	
10.4	231, 238-9
13.8	236
Alexander	
4.5	204n.146
Aristides	
7.3-4, 6	236
25.2-3	249n.89
Demosthenes	
7.1-2	282
9	277
10.1	242
10.3	249n.90
11.1-2	272
14.4	243
25.7	243
Lycurgus	
10.2	87
Nicias	
10.1	240
11.10	236, 240
Pericles	
23.2	243
35.5	243
38.2	241
Phocion	
24.3-5	248n.79
Solon	
4.7	242
17.2	246-7n.53
31.5	246-7n.53
Themistocles	
20.2	249n.89
24.1	238
25.1	241
25.3	242
[PLUTARCHUS]	
Vitae decem oratorum	
844F-845B	282

POLYBIUS

Historiae

35.2.13	281
---------	-----

PORPHYRIUS

In Ptolemaei Harmonica

p.25.3 - 29.25 Düring	308, 322n.14
p.30.19-31.21	300, 321n.13
p.56.5-57.27	297, 299, 321n.10-11
p.60.20 ff.	311
p.61.12 ff.	310
p.61.22-65.15	289 - 324
p.65.18-19	310
p.67.H-77.20	300, 321n.13
p.93.6-17	314, 323n.26

PRAXIPHANES

fr. 8-23 Wehrli	251, 264n.5
-----------------	-------------

PRISCIANUS LYDUS

Metaphrasis in Theophrasteam De anima diputationem

p.3.34-4.2 Bywater	200n.67
p.8-14	171
p.14.10-12	194-5, 202n.107, 203n.122, 311, 322n.21
p.15.27	199n.32
p.16.16-19	203n.119
p.18.7-12	200n.66
p.19.25-31	203n.124
p.22.34	178n.1
p.23-4	177
p.29.18-23	166
p.31.12-13	174

PTOLEMAEUS

Harmonica

p.11.1 ff. Düring	290, 320n.4
p.11.12 ff.	314, 323n.28
p.19.16 ff.	308 - 309
p.30.9 ff.	290, 320, n.4

PTOLEMAEUS PINACOGRAPHUS

Vita Aristotelis

no.74 Düring	81
--------------	----

QUINTILIANUS

Institutio oratoria

3.1.15	251
3.7.1	252
3.8.62	252, 261

4.2.31	264n.15
4.2.63	265n.28
8.1.2	265n.30
8.2.21	254
8.3.61	259
9.4.87	262, 267n.50
10.1.27	254
10.1.83	251, 264n.1
11.3.30-65	277
11.3.137-49	285n.9, 288n.39
QUR'AN	
12.4	86
20.40	89
29.20	95
53.47	95
QUSṬA B. LŪQĀ	
Al-Farq bayna r-rūḥ wa-n-nafs	
83	81
AL-ŠAHRĀSTĀNĪ	
Al-Milal	
337.14-16	73-4, 111n.24, 112n.28
337.17-338.14	84-92, 11n.25, 112n.28, n.44
AL-ŠAHRĀZURĪ	
Rawḍat al-afraḥ	
vid. ms. Londinensis (Br. Mus.) Orient. Add. 24738	
SCHOLIA	
In Pindari Pythionicam	
2.3 (t.2 p.32 Drachmann)	249n.96
In Platonis Leges	
631C (p.303-4 Greene)	87
SENECA	
De ira	
1.12.3	211
SEXTUS EMPIRICUS	
Adversus mathematicos	
7.1-24	122
SIMPLICIUS	
In Aristotelis De anima	
p.139.2-5 Hayduck	203n.126
p.139.29	178n.1
p.286.30-2	177

- p.286.31-2 178n.1
- In Aristotelis Categorias
- p.5.3-6.5 Kalbfleisch 116-17
- p.10.24 ff. 265n.23
- p.253.3-13 200n.52, 212-15
- In Aristotelis Physica
- p.964.31-965.1 Diels 211, 218
- p.998.13-16 202n.112
- p.1236.1 198-9n.18
-
- SIWAN AL-HIKMA
- Muhtasar
- vid. COD. vel MS. Istanbul, Fatih 3222
- Muntahab
- 376 77
- 1171-5 73-4
- 1175-94 84-9
- 1194-9 91-3
- 1230-59 74
- 2069-71 93-4
- STOBAEUS
- Anthologium
- 3.3.42 92
- 3.4.68 88
- 3.19.12 210
- 4.1.72 95
- 4.20.64 213
- SUDA
- s.v. diosmos 203n.127
- s.v. orgeonas 62n.62
- s.v. osphrantikon 203n.127
- s.v. rhis 203n.131
- s.v. Theophrastos 46
- SYRIANUS
- In Aristotelis Metaphysica
- p.191.12-24 Kroll 205
- THEMISTIUS
- In Aristotelis De anima
- p.62.29-32 Heinze 203n.126
- p.98.35 - 99.3 171
- p.102.11 176
- p.107.30 ff. 112n.43, n.47
- p.107.31-2 169
- p.108.8-10 178n.2
- p.108.11 178n.1, 199n.25

p.108.27-8	174
p.109.4-5	171
p.114.33	175-6
p.115.5-9	175
p.115.10	175-6
In Aristotelis Physica	
p.197.4-8 Schenkl	202n.112
THEOPHRASTUS	
Causae plantarum	
1.2.1	228n.24
1.2.3	228n.24
2.8.1	200n.50
6.1	185-7, 195, 198n.10, 199n.22, n.28, 201n.74,78, 202n.106-7, 204n.153, 207
6.1-4	201n.70, 207
6.2	200n.50, 204 n.153-4
6.3	198n.15, 199n.22,29-30, 200n.52, 201n.89,91, 204n.145
6.3-13	198n.14
6.4	185-7, 199n.29, 200n.38,56,58,201n.79, 205
6.5	198n.14, 200n.58, 59, 204n.154
6.6	190-1, 199n.29, 200n.49,55,57,59, 201n.72,76-7,100
6.7	199n.19,29, 201n.75,85-6,88, 202n.97
6.9	186, 198n.14,16, 199n.29, 200n.55, 202n.106,113,117, 203n.135,137
6.10	199n.34, 201n.100
6.11	198n.15, 199n.31, 200n.49, 201n.82, 202n.99-100, 203n.137
6.12	199n.29, 200n.52, 201n.77, 202n.100, 204n.153-4
6.13	199n.29, 200n.52, 201n.77
6.14	198n.14,16, 200n.64, 201n.86, 202n.106,113, 203n.135,137-9, 204n.140
6.14-20	198n.14
6.15	202n.94
6.16	196, 198n.16, 200n.56,64, 202n.98,113, 203n.136-7, 204n.138,144,151
6.17	202n.99,114, 203n.137, 204n.138, 141-2, 154-5
6.18	204n.140-1
6.20	198n.15, 199n.24, 204n.142
Characteres	
2.10	286n.18, 287n.22
8	245n.24
8.1-7	274, 287n.22
11.3	287n.22
12	247n.70
15.1	288n.38
17.1-9	216, 220-2
26.6	237, 247n.65

Historia plantarum

1.1.2	217
1.1.6	213, 219
1.1.9-11	225
1.2.3	225
1.2.4	217
1.8.6	228n.24
1.12.1-2	198n.8, 199n.34, 201n.81
2.6.6-11	213-14, 219
4.7.1	47
4.11.1-7	289, 320n.1

De igne

76	48
----	----

De lapidibus

4	47
22	48
38	47

Metaphysica

1.5 ff.	112n.43, n.47
8.25	112n.47
9.28-34	143-63

De odoribus

1	199n.23, 200n.39, 202n.106
3	201n.116
4	204n.154
5	198n.10, 16, 203n.135
7	184, 198n.10, 199n.20-1
9	202n.106
25, 33, 35	204n.149
36	200n.50
45	202n.117, 204n.150
49 ff.	110
60	200n.50
64	200n.55
67	200n.106

De sensibus

20	202n.110, 205-6
21-22	202n.109, 203n.119, 207n.3
46	203n.124
62	114n.75
69	204n.155
72	204n.153
84	201n.78
88 ff.	114n.76
89-90	204n.152
90	202-3n.117, 204n.144

De ventis

49	199n.35
----	---------

THEOPOMPUS

FGrH 115 F 86	242
FGrH 115 F 327	249n.98
FGrH 115 F 330	249n.98

THUCYDIDES

Historiae

1.71.1-5	229n.27
1.84.1-4	229n.27
1.136	240
1.141.2	239
2.39.1	247n.61
3.13.3	239-40

TRACTATUS COISLINIANUS

5-6	223
-----	-----

TZETZES

In Hesiodi Opera et dies

412 (PMG 4 p.220.11-13)	204n.147
-------------------------	----------

XENOPHON

Anabasis

1.2.16	44
6.3.19	48

Cyropaedia

5.1.16	48
--------	----

Hellenica

1.1.26	44
--------	----

ZAWZANI

Al-Muntahabāt

32.15	77
35.5	81
36.1	81
106.16-107.2	76
107.3-6	81-2
164.18	82